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THE IMPACT OF THE OVERMATCH INITIATIVE: AN ASSESSMENT OF INTERGOVERNMENTAL FINANCE IN THE TRANSIT INDUSTRY

Michael Meyer
Catherine Ross
Erik Ferguson

Georgia Institute of Technology
Atlanta, Georgia 30332

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16. Abstract

The Urban Mass Transportation Administration announced in 1989 an initiative to encourage local transit agencies to provide a greater local share for capital projects. Known as overmatch, this greater local share was expected to result in greater local flexibility in transit planning and greater consideration in Federal review and decisions regarding capital project approvals. This research project provides a history of this Overmatch Initiative. The report examines the transit finance literature and the economics/political science literature relating to greater local matching for capital projects. The research also examined the Section 15 data base to determine if this source of information could be used to reflect overmatch trends among transit agencies. A national survey of transit agencies was conducted to assess the transit industry's reaction to the Overmatch Initiative. Several case studies of local transit response to the Initiative were conducted and the results were used to assess the overall effectiveness of the new policy. The research concludes that several transit agencies were overmatching before the Initiative was announced mainly to avoid Federal regulations and time delays. Few transit agencies used financial models to identify long-term systems costs. Many transit officials concluded that the requirement for cash overmatch was extremely limiting. The research project recommends that UMTA shift the overmatch focus away from individual projects to regional, programmatic perspectives. UMTA should also take steps to require long-range, financial planning in project planning. Importantly, the report recommends a change in the current Federal program matching requirements. It is recommended to lower Federal matching ratios to 50-50 (or 60-40) with additional funds made available to those communities that meet some special "need" criteria.

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EXECUTIVE SUMMARY

One of the more recent Federal efforts at encouraging greater non-Federal participation in transit investment is known as the Overmatch Initiative. In this Initiative, the Urban Mass Transportation Administration (UMTA) proposed to provide expedited review of project documentation and, in some cases, allow the consideration of Federal funds for investments in more than one corridor, if the local share of the investment exceeds the minimum amount required by law. Another incentive was the possibility of improving a proposal's UMTA priority ranking in the decision-making process, thus influencing a project's likelihood of obtaining Federal funds. This research project assessed the transit agency response to this Initiative.

The research consisted of four major tasks. The first task was to review existing data sets (such as Section 15) to determine the status of transit investment today. Contacts were also made with numerous governmental groups to identify other examples of overmatch programs. This task also undertook a literature search which examined the economics and political science literature for discussions of intergovernmental programs based on Federal-local matching. The second task was to prepare and conduct a national survey of transit agencies to identify the capital investment strategies currently under consideration, and the local response to the Overmatch Initiative. The third task was to evaluate the results of this survey, and the final task was to conduct more detailed case investigations in six cities--Atlanta, Baltimore, Denver, Houston, Los Angeles, and San Francisco. The results of this research are presented in the following pages.

RESPONSE TO OVERMATCH INITIATIVE

The research team found that, in general, there was a mixed opinion on the usefulness and appropriateness of the Overmatch Initiative. In particular, numerous transit officials expressed concern about the "fairness" issue, that is, giving those communities who can afford more local support an unfair advantage over those less able to do so. This concern was especially strong among those officials who thought that local share might be more important in UMTA's

decisions than need or cost effectiveness. Several officials suggested that overmatch might be an appropriate "tiebreaker" when transit needs have been satisfied and cost effectiveness determinations find that proposals are about even. Several agencies supported the Overmatch Initiative because they felt that it was a good way of stretching limited Federal dollars.

The research project found several communities that had already begun overmatching, some at 100 percent local shares, even before the New Starts policy or the Overmatch Initiative had been announced. The major reason for this overmatch was to avoid what were considered to be excessive delays due to Federal process and oversight requirements. In Baltimore, for example, the Central Light Rail line is funded with 100 percent local funds, according to local officials to expedite its construction. In Los Angeles, several light rail lines are also funded 100 percent locally so that they can be done "in this Century". It seems apparent, therefore, that several communities were already in the process of raising local funds to support transit capital investment. In the context of this phenomenon, there can be no definitive statement that the overmatch policy has had a significant impact on local transit financing decisions.

In those cases where a local overmatch was provided, a surprising number of proposals were initiated by private sector representatives. Although the number of such cases was quite small, especially when considered in light of the small number of agencies that responded to this survey question, the expectation was that almost all of the initiation would have been done by transit agencies.

Very few transit agencies seem to be using a long-term financial model to consider total systems cost in project proposals. The uncertainties associated with the stability of revenue sources over time requires that a fairly sophisticated financial analysis should be conducted of an agency's ability to support its system and the new project in future years. In Los Angeles, for example, such a budget scenario analysis allowed officials to determine that several projects were not likely to be funded because existing local funding sources were not going to provide sufficient revenues. In Houston, a budget scenario analysis provided good information to METRO officials about their cash flow given the construction of different transit proposals. Given that the overmatch policy encourages a greater local match, it becomes important that a greater emphasis be placed in the development of realistic financial scenarios. This is especially

true if private sector funding is expected in support of a project, where that funding is predicated on assessments or some other mechanism that depends on market forces.

An analysis of the Section 15 data base showed no indication that the New Starts overmatch criterion had any measurable impact on local financing of transit. This conclusion, although it supports the results from the rest of the research project, should be treated with some caution. In particular, it was somewhat difficult to identify private sources of funding in the Section 15 data base. In addition, the year-to-year variation in revenue sources was rather substantial, leading one to suspect that the data might not be that reliable for the purposes of this research project.

Only one region, the Bay Area, seemed to be approaching the Overmatch Initiative from a regional or programmatic perspective. The Bay Area transit overmatch strategy is based on an extensive, region-wide study of what transit capital improvements are needed in the future. Some of the facilities are to be funded with 100 percent local funds, and others are expected to have varying levels of Federal participation. Although somewhat unique in its approach, the systems perspective in transit capital planning seems to make a stronger case for Federal investment in a region, rather than in a specific facility.

Several transit officials commented that the requirement for cash overmatch contributions was extremely limiting. Such a requirement was especially constraining when dealing with private sector contributions. The major means of such contributions in the past has been land donations and or leasing arrangements. Many transit officials stated that it is very difficult to convince private developers and businessmen to contribute funding for a particular project. As long as there is a cash requirement, private sector contributions will not likely play a major role in overmatch contributions. Outside of the private sector issue, numerous transit officials thought that "in-kind" services should be allowed as part of an overmatch given that it is a cost associated with a project.

A large percentage of the survey respondents stated that they do not know how to initiate an overmatch request, or for that matter how to raise the additional funds at the local level. There was a fair amount of interest in the overmatch concept and how transit agencies could use it to raise additional local funds. This finding suggests that additional information on the

Initiative and further research on innovative local funding sources would be well received by the industry.

There was no perceived difference in the overmatch policy between the three UMTA program Tiers. Although a small number of transit officials did know the different overmatch concepts associated with each of the three UMTA program categories, the vast majority of the survey respondents did not know that the Overmatch Initiative applied to all three. Most all respondents thought the Initiative was soley aimed at new starts.

There is no industry agreement on whether the Overmatch Initiative is a good or bad idea. Many survey respondents said that no UMTA decisions have been made on the basis of overmatch, so that it was too soon to determine the policy's appropriateness. Others were vehemently opposed to any policy that required a greater local match. And others felt that the concept was quite good.

RECOMMENDED UMTA ACTIONS

Perhaps the most important recommendation from this research project deals with future use of the overmatch concept in transit and other transportation programs. The scant literature that has addressed this type of intergovernmental program management seems fairly clear on the benefits (from a national perspective) of allowing local applicants to propose a greater local share for specific proposals. Not only does this allow Federal funds to be leveraged against more projects, it encourages communities to provide a closer representation of what they are willing to pay for a service. It also forces a consensus at the local level that this proposal is something the community should be doing.

However, an overmatch concept is only likely to work if there are substantial incentives to encourage local officials to contribute additional funding. There does not seem to be any evidence that UMTA has been significantly influenced in its project decisions by the existence of overmatch. The Overmatch Initiative does allow greater flexibility in program management, but generally the survey respondents did not feel that overmatch has become an important consideration in UMTA decisions. One way of dealing with this is to change the focus of the Overmatch Initiative away from the individual project basis to the regional, programmatic

perspective. In many cases, one of the most controversial positions taken be UMTA has been the one-corridor-at-a-time approach to Federal funding. Although a systems planning component is incorporated into this approach, some argue that the resulting process severely limits an agency's ability to take a system's perspective in its planning for a community's transit future. The Bay Area strategy, which took a long time to develop and to secure local funding sources, seems to allow a systems perspective while at the same time developing an overall funding strategy for the region. It also forces the local agencies to adopt a long-range financial planning perspective in their formal planning efforts. Allowing communities to get away from a corridor-by-corridor analysis might be a good incentive to local officials in seriously considering the Overmatch Initiative.

UMTA should also take steps to require a long-range, financial planning process in connection with UMTA projects. This includes not only the UMTA project, but also the Undertaking and, in some cases, the entire financial capability of the agency. It is not unreasonable to expect that Federal funds will be spent contingent on the existence of an assessment of the local agency's ability to operate the facility and other services in the region. This requirement could be made procedural, or be provided through technical guidance. Case studies of successful financial forecasting (such as Los Angeles and Houston, in this research) could be used to develop an industry-wide approach to such forecasting. The Federal interest in making sure an investment will meet national needs goes beyond the narrowly defined project under consideration.

There is a perception that the Overmatch Initiative is unfair to those communities that are unable to afford additional local funds, and thus, as many survey respondents stated, "the rich get richer". This equity issue is a serious one and needs to be dealt with. The overmatch criterion in UMTA evaluation is clearly an important one, but either it should receive less weight than other criteria (which it might have already), or applicants should be classified in some manner by their ability to pay. In the latter case, some index could be developed for each applicant community which examines economic growth, tax base, future population/employment figures, etc., and if it is determined that a community is in a strong growth or healthy climate, the overmatch criterion will be given greater consideration. Those communities that fit into the

other category would not have overmatch as a criterion in the funding decision. Another way of accomplishing the same goal is to lower the current Federal-local matching ratios from 80-20 to 60-40 (or even 50-50) and then provide extra grant funds for those communities that can demonstrate need or for those communities that clearly meet some national criterion (such as air quality improvement).

Many respondents identified the cash requirement as unnecessarily stringent. This is apparently so especially in the case of encouraging private sector contributions. A list of acceptable "in-kind" services or donations should be incorporated into the Overmatch Policy. These in-kind donations should clearly relate to a reduction in Federal costs and not be services or facility construction that would have been provided by the local agency.

POLICY IMPLEMENTATION GUIDANCE

It was clear from the survey results and from the case investigations that many transit officials did not know much about the Overmatch Initiative. Although several did have the "Dear Colleague" letter from the UMTA Administrator, most had expected to receive further information on what the Initiative consisted of, and what steps were necessary to participate in the program. In particular, several transit officials commented that the UMTA regional offices were not able to provide much further information that what was available in the letter. This lack of information, perhaps more than anything else, has probably beem an important reason for limited local response to the Initiative. If UMTA is serious about the Overmatch concept, it seems clear that technical guidance should be issued, information disseminated on successful overmatch efforts, and clear indications given on how important overmatch is in the UMTA decision-making process. A policy which relies on incentives to encourage a change in local behavior needs to make clear what these incentives are.

THE IMPACT OF THE FEDERAL OVERMATCH INITIATIVE ON LOCAL TRANSIT DECISION-MAKING

INTRODUCTION

The history of urban mass transit finance in the United States is characterized by changing perspectives of, and varying roles for, the major actors involved in the provision of transit services. Perhaps the most important trend in such finance during the past decade has been the shift away from Federal support of transit investment to an increasing reliance on State and local resources. One of the more recent Federal efforts at encouraging this greater non-Federal participation in transit investment is known as the Overmatch Initiative. In this Initiative, the Urban Mass Transportation Administration (UMTA) proposes to provide expedited review of project documentation and, in some cases, allow the consideration of Federal funds for investments in more than one travel corridor, if the local share of the investment exceeds the minimum amount required by law. Another incentive, besides expedited project review and greater planning flexibility, is the possibility of improving a proposal's UMTA priority ranking and thus presumably influencing Federal decision-makers to favor such Overmatch projects. The Overmatch Initiative permits an examination of the local commitment to capital-intensive transit investment and the respective roles of State/local governments and the private sector. Besides being of some interest because of its possible impact on Federal-State-Local transit finance, the Overmatch Initiative also provides an interesting new perspective on the Federal role in all forms of transportation investment, and perhaps in other areas as well.

The purpose of this research project was to assess the response of transit agencies to this Overmatch Initiative. Will it provide increased leverage to Federal and local officials to increase the level of transit investment in urban areas? Are there examples of "good" practice or innovative approaches to providing a greater-than-required local match? What role does the private sector have in providing a part of the local share? What recommendations can be made regarding future Federal actions in transit financing? Does the Overmatch Initiative provide guidance to the U.S. Department of Transportation on how overmatch provisions could be incorporated into other grant programs? In addition to these questions, the research team

examined the Section 15 transit performance monitoring database to determine if such a database could be used to monitor the possible trends in local transit investment as it relates to greater local commitments.

RESEARCH METHODOLOGY

The research project consisted of four major tasks. The first was to review existing data sets (such as Section 15) and specific transit investment proposals to determine the status of transit investment today. The intent of this task was to describe major characteristics of local transit finance, and through a literature search, identify the theoretical and practical factors that relate to the use of Federal incentives to influence local financing decisions. If the transit Overmatch Initiative was just another example of a Federal program that provides incentives for a greater local match, the effectiveness of the Intiative could perhaps benefit from knowing the results of these other programs. On the other hand, if the Overmatch Initiative was unique, its experience could be influential in the development of other Federal policies. To determine the "uniqueness" of the Initiative, contacts were made with the Advisory Council on Intergovernmental Relations, the General Accounting Office, the Department of the Treasury, Public Technology, Inc., the National League of Cities, the American Association of State Highway and Transportation Officials, several State departments of transportation, and several university research centers.

The second major task was to prepare and conduct a national survey of transit agencies to identify the capital investment strategies currently under consideration. This survey was designed to explore the local experience with transit investment and exposure to the Overmatch Initiative. If an investment had been developed within the Overmatch Initiative context, that is, a greater-than-required local share was being proposed, further questions were asked regarding the sources of the additional local funding and the role of the private sector. Even if the transit agency did not have any projects developed with an overmatch provision, the survey asked subjective questions on local perspectives on the Initiative and asked respondents to identify recommended changes. The survey was pre-tested at the Metropolitan Atlanta Rapid Transit Authority (MARTA) and through a series of visits with MARTA officials, the questions were refined to reflect a typical transit agency's understanding of the survey questions. The surveys

were mailed to the 65 largest transit agencies in the country. Follow-up letters and phone calls were made to encourage agency response. Of the 65 surveys mailed, 44 were completed and sent to the research team. More than 90 percent of the transit agencies actually involved in large-scale, capital investment responded to the survey. The survey instrument is shown in appendix A.

The third task was to review and assess the results of this survey. This assessment included the identification of any trends or themes that occurred across all agency responses. The survey results were used in comparison with the Section 15 data to determine if this monitoring process truly reflected reported State and local funding for transit. This review also was used to identify a small number of cases that became the subject of more detailed analysis. This more detailed analysis focussed on those cities where unique or innovative local funding strategies had occurred, or were occurring, within the context of the Overmatch Initiative; or where some aspect of the local response was determined to be important to understanding the effectiveness of the Initiative; or where strong opinions for or against the Initiative had been indicated in the survey.

The final task was to conduct a more detailed analysis of specific case sites. These sites included Atlanta, Baltimore, Denver, Houston, Los Angeles, and San Francisco. Each of these cases provided some interesting perspective on local funding strategies and on agency response to the Overmatch Initiative. Atlanta was chosen for its aggressive pursuit of Federal funds in the expansion of the MARTA system. Baltimore was selected because of its ambitious construction of a light rail line through the region and its very high share of non-Federal funds. Denver was included in this detailed analysis because it did not have an Overmatch project, but was definitely trying to participate in the program. Houston was an important site because of its rather large proposed private sector contribution and the difficulties in assuring that such a financial commitment would occur over the many years often necessary to build a facility. Los Angeles was included because it was the first major investment project which had reflected in the full funding agreement with UMTA provisions for local overmatch. In addition, the private sector contribution (through benefit assessments) became embroiled in legal challenges and thus shows the uncertainties that can be associated with a diverse range of local funding sources. San

Francisco exhibited a programmatic approach to the Overmatch Initiative by proposing a regional rail plan consisting of numerous rail facilities, each having differing Federal shares, but in total having a very low overall Federal participation. Each site was visited and more detailed questions and exploration of the survey responses for that city were made.

It was expected that this research would provide Federal, State, and local officials with a better understanding of what is occurring nationally with transit financing, and in particular with the Overmatch Initiative. Although not originally part of the research objectives, the results of the research also provided some useful guidance on effective policy implementation.

REPORT ORGANIZATION

This report is organized into five major sections. The next section examines the historical context of the Overmatch Initiative and the concepts found in public finance, political science and the economics literature that relate to the basic principles found in the Initiative. The second section discussed the results of the survey. Included in this section are summaries of the key findings from this survey analysis. The third section describes in more detail the experiences of the six case studies. The fourth section presents the results of the research effort that focussed on the Section 15 database. The final section presents the project conclusions and recommendations.

THE OVERMATCH INITIATIVE AND FUNDAMENTAL CONCEPTS

Before discussing the theoretical and practical concepts that underpin the use of Federal incentives to change local decisionmaking, it is first necessary to understand what the Overmatch Initiative is. The next section provides a history of the Initiative, followed by a review of theoretical concepts that form the foundation of such efforts.

THE OVERMATCH INITIATIVE IN AN HISTORICAL CONTEXT

The history of the Overmatch Initiative can be traced back to the early 1970's when UMTA officials, concerned about the large Federal commitment to rail starts (and with many new proposals on the drawing boards), teamed with the Federal Highway Administration to promulgate the Joint Transportation Planning Regulations.[1] One of the requirements of these regulations was the development of a Transportation System Management (TSM) plan which identified the actions that could be taken in metropolitan areas to make more efficient use of transportation systems.[2] This was one of the first formal efforts on the part of UMTA to encourage a re-examination of local transportation priorities in the hopes of shifting priorities toward smaller-scale, less capital-intensive projects.

In May, 1984, UMTA issued a new policy statement on the criteria for Federal financial support for new mass transportation investments. Known as the "New Start Policy", this policy was developed in response to the legislative history of the Surface Transportation Assistance Act of 1982 which included references to cost effective investment decisions and the provision of extra local financial effort in funding transit investments. The 1984 Senate Appropriations Committee Report (adopted in conference) also spoke about funding decisions based on the results of alternatives analyses, a determination of cost effectiveness, and the degree of local

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[1]Urban Mass Transportation Administration and Federal Highway Administration, "Transportation Improvement Program", Federal Register, September 17,1975.

[2] For a description of the TSM policy, see Gakenheimer and Meyer, "The Sources and Prospects of TSM," Journal of the American Planning Association, January, 1979.

financial commitment, the latter of which included some assessment of stable and reliable funding sources to maintain and operate the system. The New Start policy outlined the process that transit agencies needed to follow to be considered for Federal grants. In particular, the policy presented a rating system that was to be used by UMTA in determining its financial commitment. The rating system consisted of two major parts--not surprisingly given the legislative history, cost effectiveness and local financial effort. Local financial effort was defined as the degree of overmatch, or the percent of project costs met in addition to the statutorly required 25 percent; an assessment of the capital financing plan, and a judgement on the stability and reliability of the funding source to operate the system once constructed.

One of the first efforts to provide the required assessment of local financial effort was done for UMTA in 1985 by Lowrey and Co.[3] The assessment of the 13 New Start projects that were in the pipeline at that time was conducted on a subjective basis, assigning a low, medium, or high rating to the overmatch category based on the following definitions:

Rating	
Low	Projects funded up to 30 percent from local revenue sources. This included those projects which provided the statutory required 25 percent local share.
Medium	Projects funded with greater than 30 percent, but less than 50 percent non-Federal funds.
High	Projects to be funded which exceed 50 percent non-Federal contribution.

Based on these criteria, only two New Start projects received a "high" rating for overmatch, six received "medium", and the remaining four received "low" ratings.

The next major development occurred on March 13, 1989 when Secretary Skinner, in an appearance before the Legislative Conference of the American Public Transit Association (APTA), announced the Overmatch Initiative. This announcement was followed the next day

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[3] Lowrey and Co., Inc. "Financial Ratings of Proposed New-Start Fixed Guideway Projects," Report UMTA-NY-06-0120-85-1, January, 1985

by a "Dear Colleague" letter from the UMTA Administrator to all transit properties which outlined the basics of the Initiative. The APTA Passenger Transport had the announcement as a major news item the following week.[4] All three announcements indicated that further technical guidance on how to respond to the Overmatch Initiative would be forthcoming from UMTA. Such guidance was not issued.

The Overmatch Initiative, as announced by Secretary Skinner, contains many elements that are important for understanding the overall thrust of the policy. The Overmatch Initiative would provide an opportunity for State and local governments who were able to shoulder an increased share of the financing burden for mass transit capital needs to receive increased consideration of their projects by the Federal government. For this increased non-Federal share, the Department of Transportation would add extra weight in the ranking of applications having local overmatch and would also "reciprocate by processing those grants in a more expeditious manner and with whatever reductions in the amount and kind of both pre-award and post-award review that may by permitted under the law." The specifics of these amounts and kinds of reductions were, of course, of paramount interest to local officials.

The following characteristics of the Overmatch Initiative merit special attention.

1. One of the initial problems with the Overmatch Initiative was a legal interpretation of what could be overmatched. Section 4 (a) of the Urban Mass Transportation Assistance Act states clearly that the Federal match for a Section 3 grant shall be equal to 75 percent of the net project cost. Strict legal interpretation of this law implies that there cannot be a greater local share than the 25 percent required by statute. Such an interpretation led to the definition of an "undertaking". In a full-funding grant agreement for a New Start project, the undertaking consists of the 75/25 percent Federally-funded project plus the 100 percent locally funded activities that are funded in relation to the "project". The local overmatch is calculated based on the Federal share of the total undertaking cost.

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[4] American Public Transportation Association, "New Incentive Program for Discretionary Transit Grants", Passenger Transport, vol.47, no. 12, March 20, 1989.

2. The local funding commitment must be for capital, not operations. These funds must also be in place or be assured for them to count toward the local funding share.

3. The Overmatch Initiative pertains to Section 3 funding categories. Section 3 contains three such categories, often referred to as "Tiers". Each is described below, along with the overmatch characteristics associated with each.

--*Rail Modernization:* This category includes the rehabilitation and renovation of older fixed guideway transit systems. The program category is primarily aimed at the eight U.S. urban areas having older rail systems (Boston, Chicago, Cleveland, New York, Northern New Jersey, Philadelphia, Pittsburgh, and San Francisco). If these systems were to provide a 50 percent local match for projects in this category, the agencies would see significant administrative improvements in UMTA grant approvals and management, as well as consideration for multi-year rail grants.

--*Bus and Bus-Related*: This investment category covers the purchase of buses and the construction of bus-related facilities. UMTA had established five "funding priorities" for the evaluation of these applications. In order of priority, these were projects consisting of: 1) statutory, contractural and administrative commitments, 2) bus maintenance facilities, 3) bus vehicles for new and expanded service, 4) replacement vehicles, and 5) other bus or bus-related projects. According to the Initiative announcement, grantees would have their applications elevated to the next highest priority level for each 10 percent overmatch provided. Within each priority level, the projects would be ranked according to the level of overmatch provided.

--*New Starts:* This category includes the construction of new fixed guideway systems and extensions to existing ones. Much of the documentation required for new facilities is outside the control of UMTA (e.g., environmental impact statements). Thus, UMTA could not promise to reduce the paperwork associated with such projects. However, the Overmatch Initiative promised for those projects requesting less than 30 percent Federal participation that UMTA would expedite its review of the documentation. In addition, and of some importance to several cities, such a commitment of local funds could relax the UMTA policy of "one-corridor-at-a-time" for alternatives analysis and Federal investment.

In addition to these specific categorical programs, there is some evidence to suggest that

UMTA would also entertain a multi-year, large-scale, comprehensive transit plan that cummulatively had a lower than 75 percent Federal share, but which included individual projects at varying levels of Federal commitment. The San Francisco case described later in this report presents such a transit plan, and local officials there felt that they had received some indication from the U.S. Department of Transportation that such a plan combined with substantial local overmatch could, in fact, be included in the Overmatch Initiative.

OVERMATCH IN A PUBLIC ADMINISTRATION AND ECONOMICS CONTEXT

One of the important tasks of this research project was to determine the relationship between the Overmatch Initiative and the structure of intergovernmental program management that exists in this country. This determination was made by investigating current funding programs that require local match, and through a review of the relevant literature.

The research team identified several States that have economic development funding programs that require some local funding match from the target community. The Michigan Department of Transportation, for example, has an economic development investment program that awards grants to communities on a statewide competitive basis. A 25 percent local match is required, although the Transportation Commission can waive this local match requirement in case of economic hardship. Michigan Department of Transportation officials have found that a vast majority of projects propose the 25 percent match. Some communities have proposed projects with a local match of as high as 40 percent. The Commission has taken special note of such a local commitment and has considered it to be an important indication that project proponents are serious about the project. However, the Michigan DOT officials stressed that projects are not prioritized on the basis of overmatch. In fact, there was some feeling that these overmatch projects were not as technically "worthy" as those meeting the 25 percent requirement and thus have tended not to be funded.

The Iowa DOT economic development program is recognized as one of the most comprehensive in the country. The program has been in operation for five years and is aimed at helping communities attract business. The community, which applies to the State DOT, must

provide some local match, the exact amount of which is negotiated based on the number of jobs that are likely to be created. Usually, the match is in the vicinity of 20 percent. If a community contributes more than the 20 percent (or whatever the percentage required by the State through negotiations), the likelihood of receiving State funds is enhanced. However, State officials emphasized that the decision on grants has been made on the basis of many different factors, and that overmatch is just one consideration. In fact, when compared to the other technical and political factors, overmatch was not considered to be really that important.

The Massachusetts Executive Office of Transportation and Construction funds a transportation/economic development program called Public Works and Economic Development (PWED). This program was initially structured to be a 100 percent State-funded program. The response from local communities was so overwhelming, and in some cases so technically weak, that the State decided to require a local match of 25 percent to assure a local community's commitment to the project. In some cases, local communities have proposed higher local matching. In particular, for those projects where private developers were going to receive primary benefit from the road improvement, the community was usually able to combine local funds with private funds to provide greater than 25 percent local match. State officials feel this program has been very successful, and have, in some cases, placed greater weight to those applications having a greater local share. However, State officials also worry about the implications of those communities being able to afford local match or who are able to obtain private sector contributions overwhelming those communities not as able to provide local share. This equity consideration has led to the State trying to consider the fiscal ability of the applicant in its decision to award PWED grants so that those who need the grants the most receive them.

For transit investment, there are few examples in the literature of local applicants providing a greater-than-required local share. The transit finance literature is heavily focussed on the different types of funding arrangements and innovative private sector contributions that are being tried around the country. The literature is too voluminous to review in detail here. As an example, however, a report entitled Dedicated Funding Arrangements fpr Public Transit Systems provides a description of the dedicated funding sources, the legislative histories, and lessons

learned from six metropolitan area transit systems.[5] A report entitled Financing for the Future: Changing Roles in Mass Transit reviews the important financing roles now being adopted by the States and examines four projects that have relied on private sector participation in the operations of transit services.[6] A major trend found in most of the reports on transit finance is the significantly enhanced role of the States in funding mass transportation, combined with an increasing local willingness to establish dedicated funding sources for the funding of transit investment. Certainly, this local willingness is not universal, but there does seem to be a trend toward the use of dedicated taxes for transit, especially in those areas where congestion is considered to be a major problem.

The public finance and intergovernmental relations literature is full of descriptions of Federal/State/local grant programs. Most of this discussion relates to the specifics of intergovernmental transfers within a Federal system of government. Very few articles examine the use of matching and the requirement of higher local match as a means of meeting national objectives. One of the few articles that does discuss this topic was written by Bezdek and Jones.[7] In this article, the authors examine the efficiency with which the Federal categorical, or conditional, grants-in-aid system achieves desired objectives. They point out that such a question is an important one given that, as of 1988, there were over 400 Federal categorical grant programs with about 60 percent involving some form of local match. In examining Federal grants for the fiscal years 1983 and 1984, the authors concluded that State/local governments spended substantially larger sums in the target areas than the levels which were required to qualify for the Federal funding. In addition, the authors argue that if the government went to open-ended, conditional grants, with local share requirements that matched local desires for obtaining the Federal funds, a greater stimulus and local commitment would be provided to

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[5] U.S. Department of Transportation, Dedicated Funding Arrangements for Public Transit Systems, Office of the Secretary, June 1985.

[6] Krause, R., D. Patel, and B. Gathy, Financing for the Future: Changing Roles in Mass Transit, Urban Mass Transportation Administration, December 1987.

[7] Bezdek, R. and J. Jones, "Federal Categorical Grants-In-Aid and State-Local Government Expenditures," **Public Finance**, vol. 43, no.1, 1988.

State/local agencies to invest in the target programs.

. The article presents information on the State/local matching requirements for Federal grants over a period of 15 years, from 1971 to 1986. This information is shown in Table 1 which indicates an increasing average local match over this 15-year period (due, in part, to the relatively high matching ratio for Medicaid of 45 percent). Of particular interest was an analysis which showed the ratio of actual State/local spending compared to that required to receive Federal funding. This information for FY 1984 is shown in Table 2. The authors conclude their analysis by arguing that because many Federal grants require relatively low amounts of local match, such grants are viewed by local officials as equivalent to unconditional, general-purpose grants in their impact.

The economics literature, particularly that which focuses on public investment, has examined the effects of intergovernmental grants on State/local expenditures from the perspective of social benefits. Perhaps the most recent analysis on this issue has been undertaken by Gramlich.[8] The economic basis for categorical grants, according to economists, is the concept of benefit spillovers. This concept is shown in Figure 1. Line D in Figure 1 represents the demand function for some public good provided by a specific community. However, citizens of other communities might benefit from this public good as well (e.g., parks, roads, etc.). Therefore, the demand function D represents the summation of demand for the public good of all who benefit. If the marginal cost of the public good is denoted as P = MC (as shown in Figure 1, the community acting alone will provide simply Q units whereas the social optimum level would be Q*. One way of correcting this situation is for a higher level of government to pay m* of the cost of each unit of public good, thus reducing its price to P(1-m*) and increasing public spending to Q*. Of course, if the amount of funds from the higher level of government is limited, local public spending rises to that point where there is no longer any subsidies, point Q_K in Figure 1, after which the price reverts back to P = MC and the quantity produced stays at Q. Thus, from a national perspective, the provision of Federal funds would not assure the optimal level of overall funding for a public good. As noted by Gramlich, the provision of

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[8] Gramlich, E., A Guide to Benefit-Cost Analysis, Second Edition, Prentice Hall, 1990.

TABLE 1--STATE AND LOCAL GOVERNMENT MINIMUM MATCHING SHARE REQUIREMENTS (MILLIONS)

Fiscal Year	Federal Grants	State and Local Minimum Matching Require-ments[a]	Total	Federal Per Cent of Total	State and Local Per Cent of Total	Total
	(1)	(2)	(3)	(4)	(5)	(6)
1971	$ 28,099	$ 12,036	$ 40,135	70.0%	30.0%	100.0%
72	34,375	15,252	49,627	69.3	30.7	100.0
73	41,847	NA[b]	NA	NA	NA	NA
74	43,357	NA	NA	NA	NA	NA
75	49,791	NA	NA	NA	NA	NA
1976	59,094	21,975	81,069	72.9	27.1	100.0
TQ	15,920	5,676	21,596	73.7	26.3	100.0
77	68,415	26,253	94,668	72.3	27.7	100.0
78	77,889	27,603	105,492	73.8	26.2	100.0
79	82,858	29,840	112,698	73.5	26.5	100.0
1980	91,451	33,931	125,382	72.9	27.1	100.0
81	94,762	39,668	134,430	70.5	29.5	100.0
82	88,195	39,804	127,999	68.9	31.1	100.0
83	92,496	39,694	132,190	70.0	30.0	100.0
84	97,577	46,972	144,549	67.5	32.5	100.0
1985 est	107,016	54,000	161,016	66.5	33.5	100.0
86 est	100,668	52,969	153,637	65.5	34.5	100.0

[a]OMB analysts calculated these by estimating from the statutory matching requirements the minimum amount required to be spent by State-local governments on each matching grant program to qualify for maximum Federal funds.

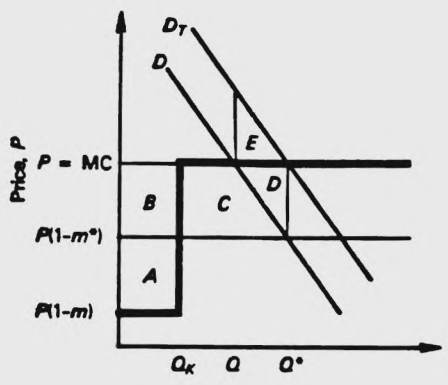
[b]NA: Not available.

Source: Bezdek and Jones, "Federal Categorical Grants-in-Aid and State-Local Government Expenditures," Public Finance, vol. 43, no. 1. 1988.

TABLE 2--COMPARISON OF REQUIRED LOCAL RATIO TO THAT ACTUALLY PROVIDED

	Statutory State-Local Matching Requirements[a]	Federal Intergovernmental Expenditures	Minimum State-Local Expenditures Required to Obtain Maximum Federal Matching Funds	Total Actual State-Local Expenditures[a]	Ratio of Actual State-Local Spending to Minimum Required
	(1)	(2)	(3)	(4)	(5)
Total[b]	8.306	898,723	$142,342	$555,605	3.9
Education and Libraries	0	13,608	13,597	178,521	13.1
Elementary and Secondary	.30	9,414	13,449	120,896	9.0
Higher Education	0	4,120	0	47,613	∞
Libraries	.50	74	148	2,413	16.3
Other Education	0	0	0	7,599	∞
Highways	.16	10,204	12,083	39,516	3.3
Interstate	.10	3,029	3,366	5,237	1.6
Primary, Secondary, and Urban	.15	3,412	4,014	8,129	2.0
Other Highways	.20	3,763	4,704	26,150	5.6
Public Welfare	.40	40,054	67,056	74,204	1.1
Medical Assistance	.45	21,141	38,438	39,311	1.0
Maintenance Assistance	.46	8,268	15,311	15,311	1.0
Other Welfare	.20	10,645	13,306	19,582	1.5
Health and Hospitals	.20	4,070	5,096	46,419	7.2
Health	.20	3,972	4,965	12,277	2.5
Hospitals	.25	98	131	34,142	188.6
Natural Resources	.25	2,628	3,518	7,421	2.1
Fish and Wildlife	.30	150	214	1,014	4.7
Forestry	.25	232	309	583	1.9
Other Natural Resources	.25	2,246	2,995	5,824	1.9
Parks and Recreation	.35	71	109	8,343	76.4
Public Safety	.25	90	116	41,785	360.2
Police Protection	.25	37	49	19,262	390.5
Fire Protection	0	3	0	8,202	∞
Correction	.25	50	67	11,088	166.3
Protective Inspection and Regulation	0	0	0	3,233	∞
Environment	.29	2,971	4,172	16,226	3.9
Sewage	.30	2,604	3,720	11,516	3.1
Pollution Abatement and Control	.15	240	282	1,225	4.3
Other Environmental	.25	127	169	3,485	20.6
Housing and Urban Renewal[c]	.40	8,817	$4,695	9,283	.6
Airports	.20	695	574	3,584	6.2
Urban Mass Transportation	.50	3,695	7,390	13,351	1.8
Water Transport and Terminals	.30	71	101	1,329	13.1
Social Insurance Administration	0	2,039	0	2,556	∞
Veterans Services	.30	128	183	223	1.2
Utilities	.25	218	68	39,130	575.4
Electric Light and Power	0	167	0	23,206	∞
Gas Supply	.25	4	5	3,344	627.0
Water Supply	.25	47	63	12,580	200.1
Interest on General Debt	0	0	0	28,696	∞
General Fiscal Assistance	0	6,650	0	0	∞
Other and Combined	.20	2,714	3,393	54,513	16.1

Source: Bezdek and Jones, "Federal Categorical Grants-in-Aid and State-Local Government Expenditures," Public Finance, vol. 43, no. 1. 1988.



When spending (Q) exceeds the kink point (Q_K), the matching rate (m) could be lowered to m^*, and the grant made open-ended. Spending would rise from Q to Q^* and the efficiency gain is area E.

Source: Gramlich, A Guide to Benefit-Cost Analysis, Prentice-Hall, 1990

Figure 1--Efficiency of Grants

generous matching terms in effect defeats the purpose of the grant program which stimulates less-than-optimal local government spending.

In summary, then, there is some evidence to suggest that the concept of an overmatch policy will, in fact, provide an improved efficiency in the provision of Federal grants. The literature and case examples of such an approach, however, is sparse. The transit finance literature suggests that one of the major trends in transit finance is a greater share of transit investment being provided by State and local governments. And although the private sector is playing an increasingly more important role in cases, by far the major actors in the financing of major new facilities are the State and local government agencies.

The following sections explore the experience to date with the Overmatch Initiative. From the research team's investigation, it is one of the first funding policies of its kind in transportation, and perhaps even across all areas of Federal government responsibilities. As such, it deserves attention on its possible successes and applications in other areas of intergovernmental transfers.

NATIONAL TRENDS IN TRANSIT CAPITAL ASSISTANCE, OPERATING REVENUES/ASSISTANCE, AND SERVICE SUPPLIED AND CONSUMED

In order to establish the transit financing context for this project, the research team conducted an analysis of national trends in the transit industry from 1984 to 1987 as indicated by Section 15 data. Such use of the Section 15 data has been found in the literature, and is generally considered a valid approach for determining trends in transit finance.[9] Measures of national transit industry capital assistance, operating revenues and assistance, and service supplied and consumed measures were used in the analysis. Of particular interest was an examination of any measurable overmatch effects that resulted from the announcement of the New Starts policy. Comparisons were made between those communities (and their transit agencies) that were in the pipeline for "new start" projects as of January 1990, and those that were not. This analysis had two principle objectives:

1. To identify the aggregate national effects the overmatch criterion of the New Starts policy may have had on local transit capital finance decisions prior to the development of the Overmatch Initiative.
2. To identify whether the aggregate effects of overmatch varied between communities that were in the pipeline for Federal transit capital assistance for "new start" rail projects versus those communities that were not in the pipeline, as of January 1990.

DATA AND METHODOLOGY

Data: This analysis was based on data from UMTA's National Urban Mass Transportation Statistics: Section 15 Annual Reports (1984 through 1987), the most recent, comprehensive information on national transit trends available in published form for all public transit agencies at the aggregate and disaggregate levels of analysis. Data on capital assistance,

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[9] Ferguson, Erik. 1988. U.S. Transit Management and Performance: Local and National Priorities and the Impact of Technology. Transportation Planning and Technology 14(3): 199-215.

operating revenues, and service supplied and consumed were used in this analysis. The following materials were available from various sources:

Magnetic tape data: The research team acquired complete national data from all 1979-1986 Section 15 reports for all transit agencies in the U.S. at the disaggregate level. The formatting and variable definitions on each tape varied slightly from one year to the next, but all of the raw data was available for use. A statistical analysis package was used to analyze this data. A number of comparisons across all transit agencies were possible with this package. For example, one could look at factors influencing current levels of capital expenditures for all agencies making, or planning to make, such expenditures. One could also select specific information for specific years for surveyed agencies only.

Data user's guide: The research team had a complete set of instructions on the interpretation and use of data collected through the UMTA Section 15 reporting system over its entire span, 1979-present.

Published data: The research team acquired the published UMTA Section 15 Annual Reports in single volumes for 1984-1987, the four most recent years available.[10] Data

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[10] Shorter, Rhoda and William C. Ammann. 1989. National Urban Mass Transportation Statistics: 1987 Section 15 Annual Report. Report No. UMTA-VA-06-0127-89-1. U.S. Department of Transportation, Urban Mass Transportation Administration, Office of Grants Management, Washington, D.C., September 1989.

Shorter, Rhoda and William C. Ammann. 1988. National Urban Mass Transportation Statistics: 1986 Section 15 Annual Report. Report No. UMTA-VA-06-0127-88-1. U.S. Department of Transportation, Urban Mass Transportation Administration, Office of Grants Management, Washington, D.C., June 1988.

Kerr, Carol and Linda Lally. 1987. National Urban Mass Transportation Statistics: 1985 Section 15 Annual Report. Report No. UMTA-IT-06-0310-87-1. U.S. Department of Transportation, Urban Mass Transportation Administration, Office of Grants Management, Washington, D.C., August 1987.

Kerr, Carol and Linda Lally. 1986. National Urban Mass Transportation Statistics: 1984 Section 15 Annual Report. Report No. UMTA-IT-06-0310-86-1. U.S. Department of Transportation, Urban Mass Transportation Administration, Office of Technical Assistance, Washington, D.C., September 1986.

for 1988 was not available. These annual reports included aggregate statistics on selected variables for all transit agencies combined, or specific sub-groups (e.g., agencies with 500+ peak vehicles). Also included were individual agency observations for selected variables, which could be manually input into a spreadsheet template for overmatch agencies only. For example, Table 3.04 in the 1987 report (pp. 3-36 to 3-47) identifies sources of public transit capital assistance, in dollars and on a percentage basis. The following tables, disaggregated by reporting transit agency, were used in each of the four published reports:

3.01: Total operating revenues
3.02: Dedicated state operating assistance
3.03: Dedicated local operating assistance
3.04: Total capital revenues
3.05: Dedicated state capital assistance
3.06: Dedicated local capital assistance
3.16: Service supplied and consumed

Methodology: Using UMTA's "new start" pipeline list, 26 transit systems which were currently in the pipeline for new light rail systems or extensions were identified (see Table 3). Section 15 data for these 26 transit systems by year and table identified above were transferred to a spreadsheet template. These data were combined to create a "pipeline" category for each year and table. The totals for each year and table were entered in the spreadsheet. Differences between industry-wide totals and "pipeline" totals were separately identified as "non-pipeline" totals.

A number of non-trivial problems were identified with the application of this methodology, as follows:

1. The 1984 Section 15 data were not summarized in the same fashion as were the data for the other three years. In combining the 1984 data which was given into totals, some problems with comparing service supplied and consumed totals for 1984 with the other three years became apparent. This may be a question of published data for 1984 being reported inaccurately or improperly transcribed.

TABLE 3–NEW START PIPELINE COMMUNITIES AND PROJECT STATUS

Location	Number of Projects				
	Alternatives Analysis	Pre-Engineering	Final Design	Under Construction	Total
Atlanta	1			2	3
Austin	1				1
Baltimore	1			1	2
Buffalo	1				1
Chicago	1			1	2
Cleveland	1				1
Dallas	1				1
Denver			1		1
Honolulu	1				1
Houston	1			3	4
Jacksonville			1	1	2
Los Angeles		1	1	1	3
Miami			1		1
Minneapolis	2				2
Newark	1				1
New York	1				1
Orange County, CA	1				1
Pittsburgh	1				1
Portland, OR		1			1
Saint Louis			1		1
Salt Lake City	1				1
San Diego	1			1	2
San Francisco	1	1			2
San Jose, CA	1			1	2
Seattle				1	1
Washington, DC		1			1
Totals	19	4	5	12	40

1. As of January 1990. The thirty or so projects in the systems planning stage were not included.

2. The 1987 service consumed data for "pipeline" transit systems was incomplete. Several of these items were listed in the 1987 report as questionable (Q), no response (NR) or (W). Specific performance measures were missing for one or more modes for each of the following transit systems in 1987:

Unlinked passenger trips: Austin and Santa Clara County (NR); Houston (Q).

Passenger miles: Austin (W); Baltimore, Chicago, Dallas, Denver, Houston, Jacksonville, Miami, Minneapolis, Newark, Orange County, CA, Pittsburgh, Portland, San Diego, San Francisco, and Seattle (Q).

3. Dedicated state and local capital assistance fluctuated considerably during this short four-year time period. Some systems reported a large amount of "dedicated" assistance in one year, and nothing at all in other years, either before or after. This may be a problem of definition, in that truly "dedicated" revenues presumably should flow for more than a single year in order to warrant their inclusion in this type of category.

4. Dedicated State and local operating and capital assistance from Tables 3.01 and 3.04 generally did not coincide exactly with the figures from Tables 3.02, 3.03, 3.05, and 3.06. Presumably, some transit systems failed to identify the exact nature and source of dedicated state and local operating and capital assistance, making the data in Tables 3.02, 3.03, 3.05, and 3.06 incomplete. These forms may have been omitted entirely by some transit agencies in their Section 15 annual reports, as is their right under voluntary levels of reporting.

RESULTS

Results are reported separately for capital assistance, operating revenues, and service supplied and consumed statistics for 1984 through 1987. A comparison of financial and performance trends for transit agencies in pipeline and non-pipeline cities completes the analysis.

Capital Assistance: Total industry-wide public transit capital assistance fell from $3,871 million in 1984 to $3,391 million in 1987, a 12% decline in nominal terms, and a much larger decline in real terms (see Table 4). Pipeline transit systems lost 15% of their total public capital assistance during this time period, while non-pipeline transit systems lost only 8% of their total public capital assistance. In 1987, fully 65% of all public capital assistance still went to pipeline

TABLE 4—U.S. TRANSIT GRANT ASSISTANCE

Source	1984	1985	1986	1987	Percent Change 1984-87
Total (Millions)	$3,871	$3,398	$3,833	$3,391	-12.4%
Federal Share					
UMTA Sec. 3	35.4%	36.0%	33.4%	24.9%	-38.4%
UMTA Sec. 5,9,9a	9.7	14.9	23.6	31.1	+180.8%
Other UMTA	13.7	11.8	11.2	12.0	-23.3%
Other USDOT	1.9	8.0	0.9	0.7	-67.7%
Other Federal	0.6	1.0	1.3	0.9	+31.4%
Total	61.3	71.7	70.4	69.6	-0.6%
State Share					
General Revenues	9.7%	6.9%	9.7%	5.1%	-54.0%
Dedicated Taxes	2.9	4.2	3.7	4.1	+23.8%
Tolls	0.3	0.2	0.3	0.4	+16.8%
Other State	3.0	5.0	2.5	2.5	-27.0%
Total	15.9	16.3	16.2	12.1	-23.9%
Local Share					
General Revenues	3.5%	4.3%	5.7%	7.1%	+77.7%
Dedicated Taxes	8.5	4.2	4.6	6.8	-29.9%
Tolls	1.8	0.4	1.9	3.0	+46.6%
Other Local	8.9	3.3	1.3	1.5	-85.2%
Total	22.7	12.2	13.5	18.4	-8.0%

transit systems. Federal capital assistance remained virtually constant between 1984 and 1987, while State capital assistance fell 33% and local capital assistance fell 29%. Further, State and local public capital assistance was extremely unstable between 1984 and 1987, sometimes increasing, at other times decreasing, by as much as 70% from one year to the next. This lack of State and local capital funding stability may impair the transit industry's ability to make sound judgment calls concerning long range transit capital project planning.

In 1987, $139 million in dedicated State capital assistance was provided to the transit industry as a whole from various State funding sources, including "other" taxes ($76M), property taxes ($25M), gasoline taxes ($18M), sales taxes ($16M), and commuter taxes ($4M). Pipeline transit systems received only 51% of dedicated State capital assistance in 1987 (see Table 5). Pipeline transit systems were more likely to receive their dedicated State capital assistance in the form of "other" taxes and commuter taxes, while all other types of dedicated State taxes were received predominantly by non-pipeline transit systems.

In 1987, $231 million in dedicated local capital assistance was provided to the transit industry as a whole from various local funding sources, including sales taxes ($154M), property taxes ($63M), and "other" taxes ($13M). Pipeline transit systems received fully 65% of this dedicated local capital assistance in 1987 (see Table 6). Pipeline transit systems were more likely to receive their dedicated local capital assistance in the form of sales tax revenues and "other" local taxes. Non-pipeline transit systems were more likely to receive their dedicated local capital assistance in the form of local property taxes.

Operating Assistance: Industry-wide transit operating revenues increased from $10.04 billion in 1984 to $13.38 billion in 1987, a 33% increase, at least in nominal terms (see Table 7). In 1987, 57% of all transit operating revenues were generated by the 26 pipeline transit systems identified in this study. Pipeline transit systems increased their operating revenues by less than 20% between 1984 and 1987. Non-pipeline transit systems increased their operating revenues by 57% during the same time period. It appeared that pipeline transit systems may have been trying purposefully to keep operating expenses (and revenues) down, in order to increase capital spending in anticipation of gearing up for their "new start" light and heavy rail projects. Between 1984 and 1987, non-pipeline transit systems increased total operating

TABLE 5--STATE TAXES DEDICATED TO THEIR SOURCE FOR TRANSIT CAPITAL ASSISTANCE

Source	1984	1985	1986	1987	Percent Change 1984-87
Total (Millions)	$112.8	$141.9	$142.9	$139.1	-23.3%
Share					
Income Taxes	0.0%	0.1%	0.0%	0.0%	n/a
Sales Taxes	34.2	12.3	18.6	11.4	-58.9%
Property Taxes	16.3	13.6	15.2	18.1	+36.9%
Commuter Taxes	0.8	1.5	1.2	2.8	+331.6%
Gasoline Taxes	31.9	17.2	20.9	13.3	-48.6%
Other Taxes	16.9	55.2	44.0	54.4	+296.6%

TABLE 6--LOCAL TAXES DEDICATED AT THEIR SOURCE FOR TRANSIT CAPITAL ASSISTANCE

	1984	1985	1986	1987	Percent Change 1984-87
Total (Millions)	$329.0	$141.5	$177.8	$231.2	-29.7%
Share					
Income Taxes	0.1%	44.5%	0.0%	0.3%	n/a
Sales Taxes	84.0	36.9	82.3	66.7	-44.2%
Property Taxes	14.5	9.1	3.8	27.3	+32.3%
Payroll Taxes	0.1	0.0	0.0	0.0	n/a
Utility Taxes	0.0	0.0	0.3	0.2	n/a
Other Taxes	1.4	9.4	13.6	5.5	+176.1%

TABLE 7–TRANSIT OPERATING REVENUES AND ASSISTANCE

Source	1984	1985	1986	1987	Percent Change 1984-87
Total (Millions)	$10,039	$10,668	$12,102	$13,384	+33.3%
Operating Revenues					
Passenger Fares	37.1%	36.6%	35.5%	36.3%	+30.5%
Oth. Tran. Rev.	2.2	1.8	1.8	2.0	+21.2%
Non-Tran. Rev.	3.1	3.8	3.4	3.1	+33.3%
Other	1.5	1.4	1.3	1.2	+14.2%
Total	50.8	50.8	48.6	48.5	+27.3%
Operating Subsidies					
Federal					
UMTA Sec. 3/5	9.0%	8.1%	7.4%	6.8%	+0.7%
State					
Gen. Rev.	11.6	11.8	12.2	12.3	+41.4%
Ded. Tax.	4.0	4.0	5.9	6.0	+100.0%
Total	15.6	15.8	18.1	18.3	+56.4%
Local					
Gen. Rev.	13.9	13.9	14.3	15.3	+46.8%
Ded. Tax.	10.5	10.9	11.6	11.1	+33.6%
Total	24.4	24.8	25.9	26.4	+44.3%
Total	49.2	49.2	51.2	51.5	+39.6%

revenues in all categories of operating revenues much faster than did pipeline transit systems, with the exception of the following three operating revenue categories: non-passenger transportation revenues, Federal operating assistance, and State general revenue operating assistance. In these three areas of funding, there was no significant difference between pipeline and non-pipeline transit systems, at least in terms of the rate at which operating revenues grew between 1984 and 1987.

In 1987, dedicated State operating assistance for public transit totaled $616 million, which was distributed among the following categories of State funding: "other" taxes ($342M), sales taxes ($241M), gasoline taxes ($31M), as well as a few other State funding categories which included negligible amounts of support (see Table 8). Pipeline transit systems received only about 15% of these dedicated State operating assistance funds in 1987. Pipeline transit systems received over two-thirds of their dedicated State operating assistance from "other" taxes in 1987, where "other" basically is undefined in the context of Section 15 data. Non-pipeline transit systems received over half of their dedicated State operating assistance from the "other" category, as well as significant assistance from dedicated State sales taxes and, to a lesser extent, dedicated State gasoline taxes.

In 1987, dedicated local operating assistance for public transit totaled $1.232 billion, which was distributed among the following categories of local funding: sales taxes ($563M), "other" taxes ($505M), property taxes ($115M), income taxes ($30M), and gasoline taxes ($18M). Pipeline transit systems received fully 65% of these dedicated local operating assistance funds in 1987 (see Table 9). Pipeline transit systems relied more heavily on "other" dedicated local taxes, while non-pipeline transit systems relied more on dedicated income, gasoline, property, and sales taxes, i.e. all dedicated local taxes other than "other" dedicated local taxes!

This and other supporting data suggest that a better understanding and a clearer definition of "other" dedicated State and local operating and capital assistance funding sources is needed, particularly as these relate to "new start" pipeline cities, transit systems, and projects. Although local and State dedicated taxes varied considerably from year to year in terms of sources and applications, the grand total of all local and State taxes dedicated to transit capital and operating assistance combined was much less variable. In 1984, about $1.8 billion in local and State taxes

TABLE 8--STATE TAXES DEDICATED AT THEIR SOURCE FOR TRANSIT OPERATING ASSISTANCE

Source	1984	1985	1986	1987	Percent Change 1984-87
Total (Millions)	$402.5	$488.8	$536.2	$615.7	+53.0%
Share					
Income Taxes	2.0%	0.1%	0.4%	0.1%	-92.4%
Sales Taxes	29.9	38.9	39.1	39.1	+100.0%
Property Taxes	0.0	0.0	0.0	0.1	n/a
Commuter Taxes	0.0	0.0	0.1	0.1	n/a
Gasoline Taxes	13.6	5.5	4.7	5.0	-43.8%
Other Taxes	54.5	55.4	55.7	55.6	+56.1%

TABLE 9--LOCAL TAXES DEDICATED AT THEIR SOURCE FOR TRANSIT OPERATING ASSISTANCE

	1984	1985	1986	1987	Percent Change 1984-87
Total (Millions)	$988	$1,127	$1,175	$1,232	+24.6%
Share					
Income Taxes	5.3%	3.3%	2.4%	2.4%	-43.6%
Sales Taxes	52.0	39.9	45.0	45.7	+9.5%
Property Taxes	9.0	9.1	10.4	9.3	+28.8%
Gasoline Taxes	3.3	1.6	1.4	1.5	-43.4%
Other Taxes	30.4	46.2	40.7	41.0	+68.1%

were dedicated to transit capital and operating assistance. In 1985 and 1986, this increased to $1.9 billion, and in 1987 total local and State taxes dedicated to transit exceeded $2 billion for the first time.

Service Supplied and Consumed: Annual vehicle miles of service increased by 8.4% between 1984 and 1987, while annual vehicle hours of service increased by only 6.0% during the same time period for the transit industry as whole (see Table 10). Average vehicle speeds thus increased marginally between 1984 and 1987. Service supplied measures increased slightly more rapidly for non-pipeline than for pipeline transit systems, as one might expect, given that operating revenues and expenses increased more rapidly for non-pipeline than for pipeline transit systems during this same time period. Although service supplied measures increased for both pipeline and non-pipeline transit systems between 1984 and 1987, service consumed measures appeared to decrease.

A trend toward reduced numbers of annual unlinked passenger trips is evident from the available data. This reduction in service consumed presumably is due primarily to more difficult market conditions for transit (e.g., lower average gasoline costs, higher average per capita incomes), though it could also be the result of service changes which target less productive markets. Given that average bus speeds seem to be increasing nationally at a time when traffic congestion and traffic delays appear to be increasing, strongly suggests that service changes favoring lower density areas with lower transit market potential may be occurring on a slight, but systematic basis.

PIPELINE VERSUS NON-PIPELINE COMMUNITIES

It was hypothesized that pipeline communities might vary from non-pipeline communities in their decisions regarding transit capital and operating assistance, considering the high anticipated cost of most "new start" light rail projects. Ways in which such differential behavior might be observed at the aggregate level of analysis include the following:

1. Pipeline communities might defer some capital investment projects, in order to create capital reserves in anticipation of rail construction.

TABLE 10–U.S. TRANSIT SERVICE SUPPLIED AND CONSUMED

	1984	1985	1986	1987	Percent Change 1984-87
Vehicles Operated in Maximum Service	59,116	61,943	61,216	61,245	+3.6%
Annual Vehicle Miles[1]	2,329	2,427	2,483	2,524	+8.4%
Annual Vehicle Revenue Miles[1]	2,122	2,206	2,255	2,281	+7.5%
Annual Vehicle Revenue Capacity Miles[1]	200,592	217,396	215,561	215,594	+7.5%
Annual Vehicle Hours[2]	165,381	170,644	172,486	175,309	+6.0%
Annual Vehicle Revenue Hours[2]	149,054	155,545	155,609	156,710	+5.1%
Annual Unlinked Passenger Trips[1]	8,714	8,375	7,930	7,848	-9.9%
Annual Passenger Miles[1]	35,964	37,934	36,284	36,102	+0.4%
Average Bus Speed[3]	14.24	14.18	14.49	14.56	+2.2%
Average Unlinked Passenger Trip Length[4]	4.13	4.53	4.58	4.60	+11.5%

1 In millions.
2 In thousands.
3 Annual vehicle revenue miles divided by annual vehicle revenue hours.
4 Annual passenger miles divided by annual unlinked passenger trips.

2. Pipeline communities might increase farebox revenues as a proportion of total operating costs, to relieve pressure on capital budgets.
3. Pipeline communities might reduce the current level of service provided, or at least not increase the level of service, in order to reduce current operating subsidies.

Comparative Analysis: Pipeline cities, although representing less than 10% of all transit agencies in the country, consumed well over 60% of all transit capital assistance (see Figure 2). Federal capital assistance to pipeline communities was proportional to total capital assistance. Pipeline communities received less State aid and more local aid for capital assistance than did non-pipeline communities during the study period. This was particularly true with respect to dedicated taxes for transit capital assistance (see Figures 3 and 4). In general, it appeared that the New Start overmatch criterion had little, if any, direct effect on national trends in transit capital finance through 1987.

Pipeline communities accounted for over 60% of all transit operating revenues and assistance in 1984, which declined to less than 60% in 1987 (see Figure 5). Pipeline cities generated proportionately more operating revenues, but received less Federal and State operating assistance than did non-pipeline cities. Pipeline communities received hardly any State taxes dedicated to operating assistance, but a slightly higher proportion of local taxes dedicated to operating assistance than did non-pipeline communities (see Figures 6 and 7). It appeared that pipeline communities reduced their total operating costs relative to non-pipeline communities during the study period. No noticeable increase in farebox or other revenues was apparent from this analysis, however.

Pipeline communities accounted for slightly less than half of the nation's total transit vehicle fleet during the study period (see Figure 8). Pipeline communities operated over half of the revenue vehicle miles and vehicle revenue hours, and over 60% of the revenue capacity miles, at the national level. Pipeline communities tended to operate larger vehicles more intensively than did non-pipeline communities. Almost 70% of all unlinked passenger trips at the national level were consumed on pipeline transit systems. Less than 60% of all national passenger miles travelled occurred on pipeline transit systems. The share of national passenger miles attributable to pipeline cities declined between 1984 and 1986. This information was

FIGURE 2--U.S. TRANSIT CAPITAL ASSISTANCE BY SOURCE AND YEAR
PIPELINE CITIES VS NON-PIPELINE CITIES

FIGURE 3--STATE TAXES DEDICATED TO TRANSIT CAPITAL ASSISTANCE
PIPELINE CITIES VS NON-PIPELINE CITIES

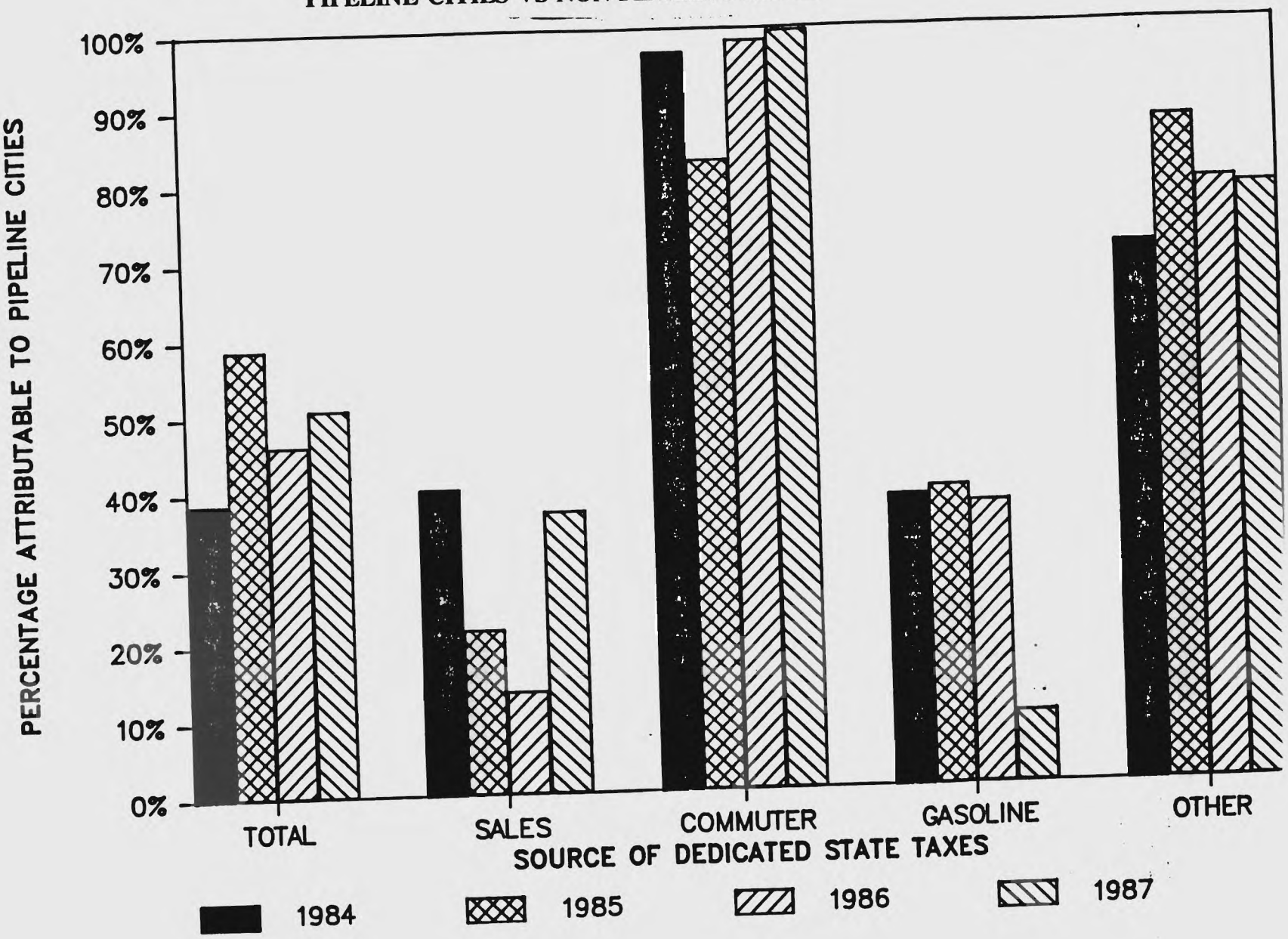


FIGURE 4--LOCAL TAXES DEDICATED TO TRANSIT CAPITAL ASSISTANCE
PIPELINE CITIES VS NON-PIPELINE CITIES

FIGURE 5--U.S. TRANSIT OPERATING REVENUES AND ASSISTANCE BY SOURCE AND YEAR PIPELINE CITIES VS NON-PIPELINE CITIES

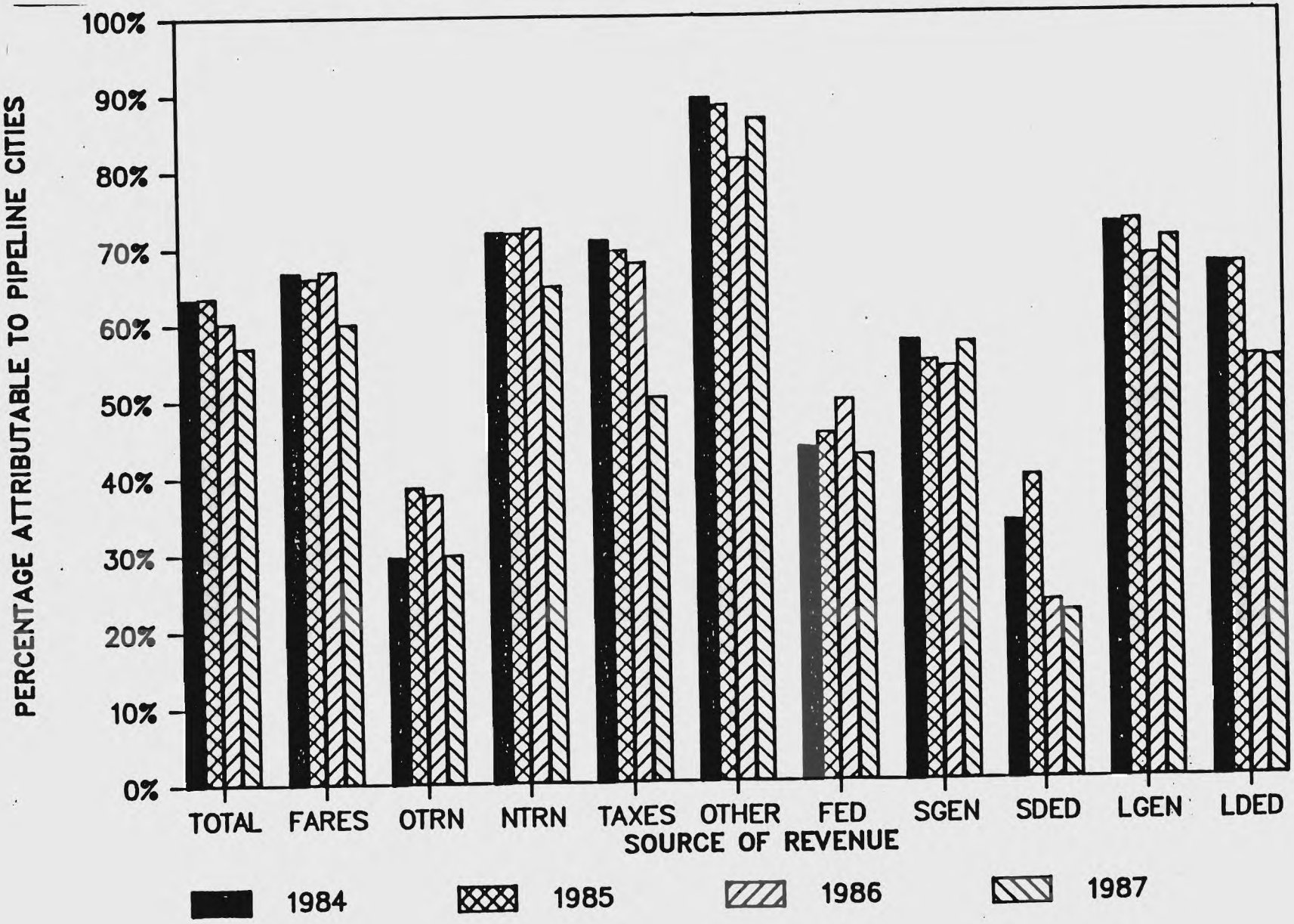


FIGURE 6--STATE TAXES DEDICATED TO TRANSIT OPERATING ASSISTANCE PIPELINE CITIES VS NON-PIPELINE CITIES

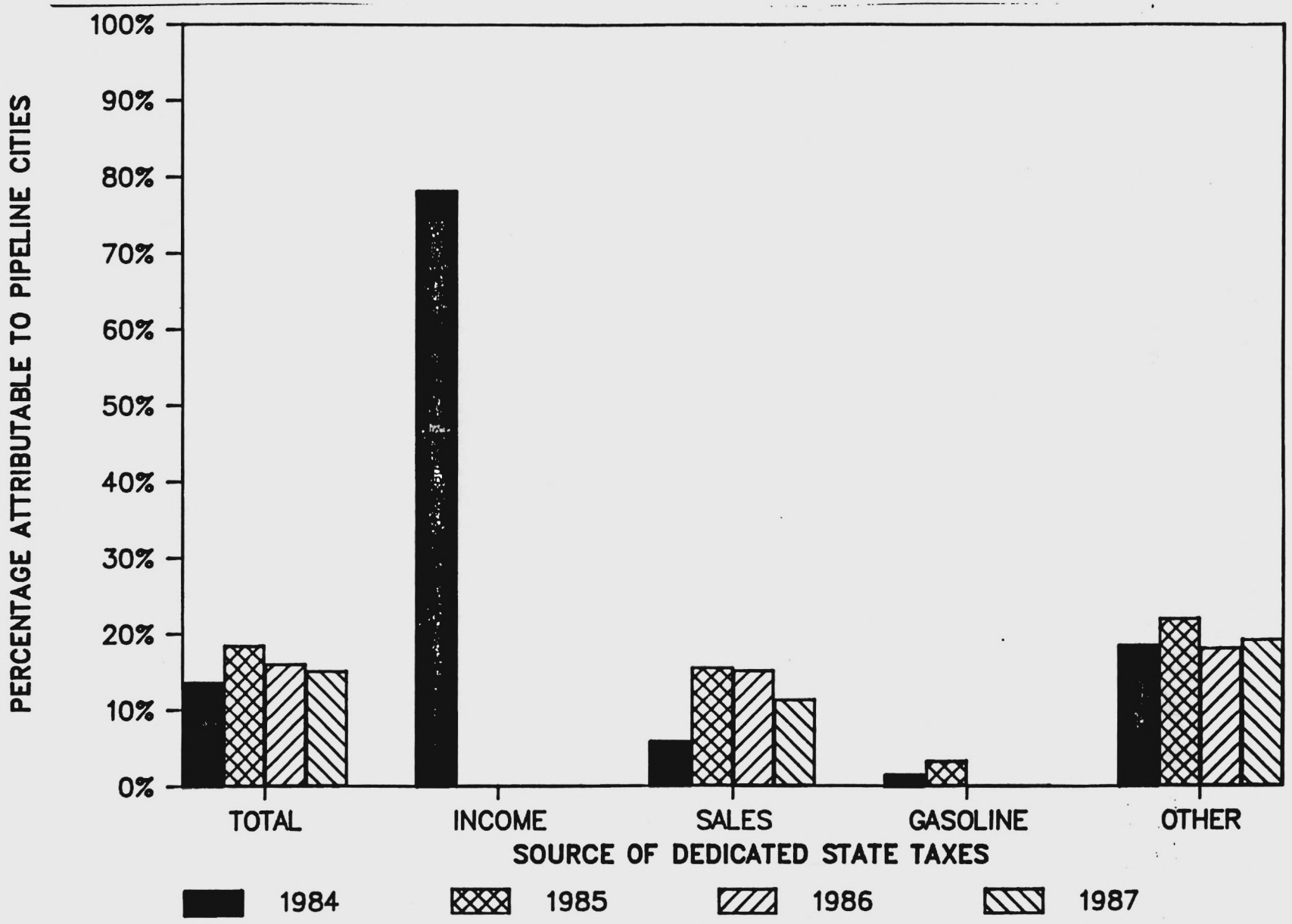


FIGURE 7--LOCAL TAXES DEDICATED TO TRANSIT OPERATING ASSISTANCE
PIPELINE CITIES VS NON-PIPELINE CITIES

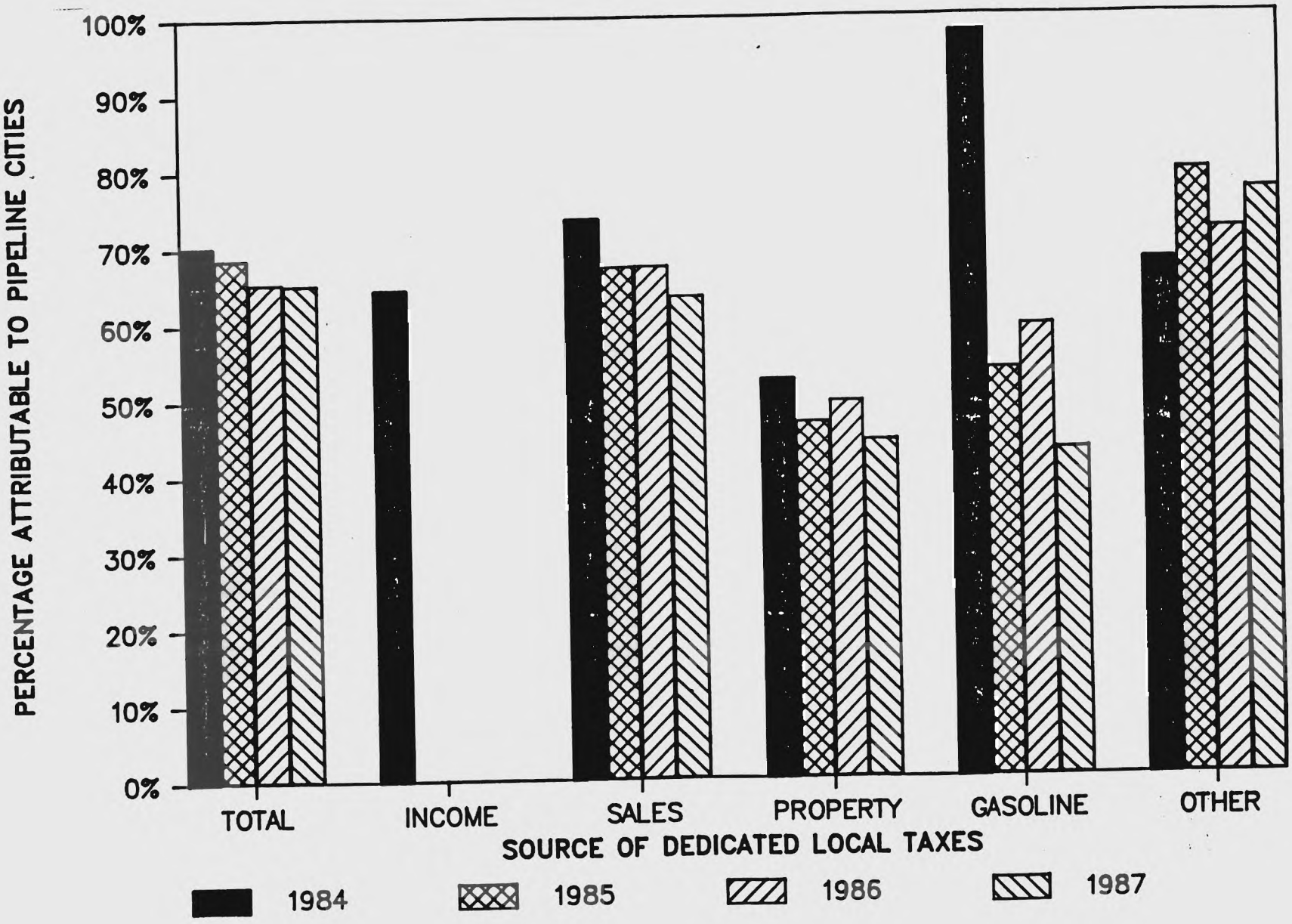
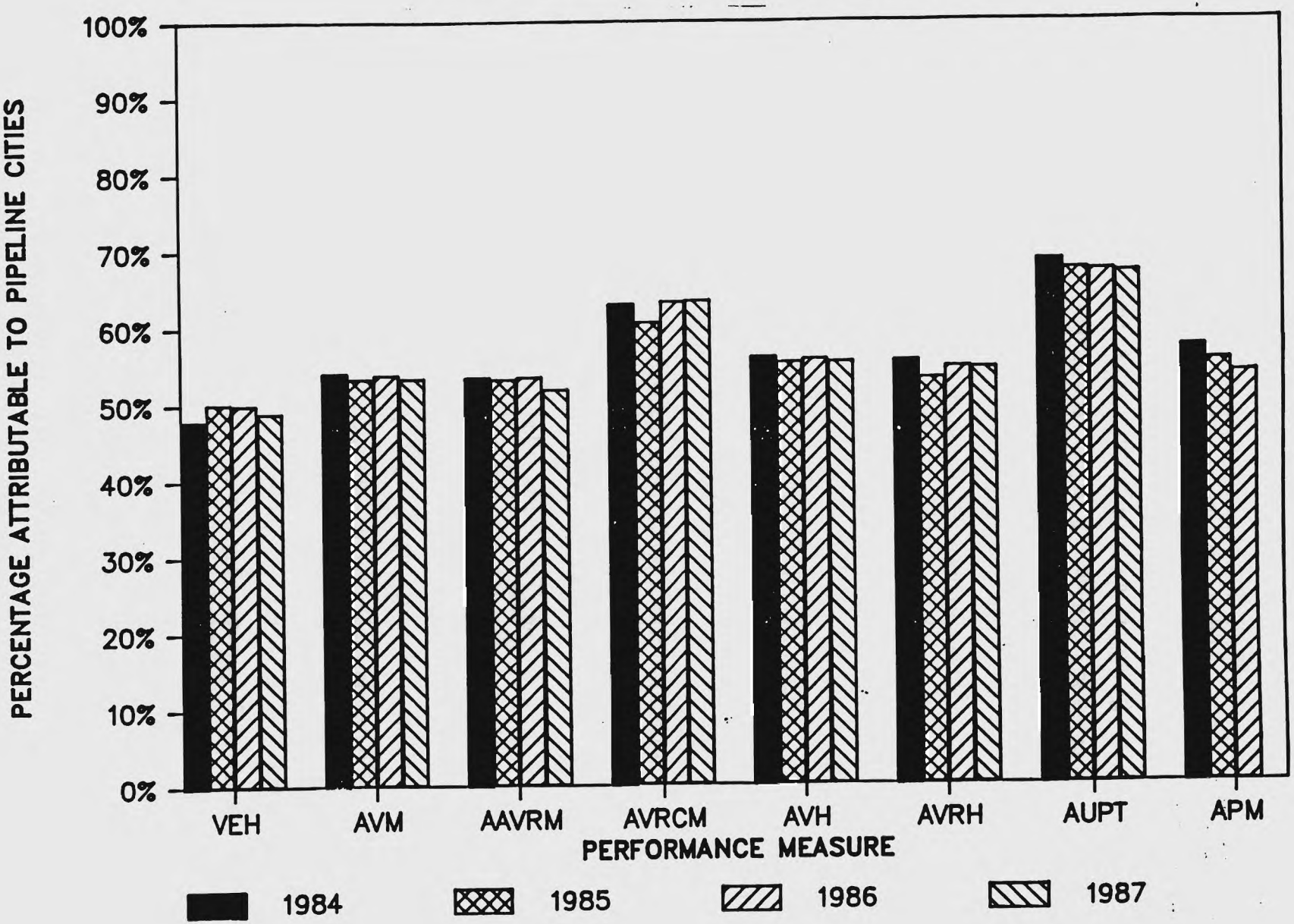


FIGURE 8--U.S. TRANSIT SERVICE SUPPLIED AND CONSUMED BY PERFORMANCE MEASURE AND YEAR PIPELINE CITIES VS NON-PIPELINE CITIES



unavailable for 1987, due to missing information in the 1987 Section 15 report.

Tables 11 and 12 show trends in average unlinked passenger trip length and average vehicle speeds for pipeline and non-pipeline cities. Pipeline communities tended to have much lower average unlinked passenger trip lengths, and slightly lower average vehicle operating speeds. Passenger trip lengths and operating speeds increased in both pipeline and non-pipeline cities, but at a much faster rate of increase in non-pipeline cities.

It appeared that the quantity of transit service provided by pipeline cities did not change in relationship to non-pipeline cities between 1984 and 1987. However, the quality of that service, as measured by average unlinked passenger trip length and average vehicle speeds, did seem to change slightly.

CONCLUSIONS

National trends in transit performance changed only slightly between 1984 and 1987. Total unlinked passenger trips declined precipitously, while passenger miles remained almost constant. More importantly, with the exception of the first year of the program, i.e., 1984, it appeared that local and State governments failed to respond in any significant fashion to the overmatch criterion for new starts by increasing their relative commitments to transit capital finance.

Although the New Starts overmatch policy was found to have little if any lasting impact on transit capital decision making at the State and local level, this may been at least partially the fault of insufficient data. More detailed data on transit capital financial sources within the Section 15 reporting environment might have led to other conclusions. For example, if these data were available for each transit agency by mode, the effect of overmatch on "new start" light rail capital projects in isolation could have been undertaken. Similarly, if information on private matching funds, and a more descriptive definition of "other" State and local dedicated taxes, might have provided better clues on the direction transit capital finance is going in at the national level.

TABLE 11--AVERAGE UNLINKED PASSENGER TRIP LENGTH IN PIPELINE AND NON-PIPELINE CITIES

	1984	1985	1986	Percent Change 1984-86[1]
Pipeline Cities	3.44	3.72	3.66	+6.4%
Non-Pipeline Cities	5.63	6.20	6.47	+14.9%

1 Passenger mile data for at least one mode of public transportation in each of the following cities were listed as questionable in the 1987 Section 15 Annual Report: Austin, Baltimore, Chicago, Dallas, Denver, Houston, Jacksonville, Miami, Minneapolis, Newark, Orange County, Pittsburgh, Portland, San Diego, San Francisco, Santa Clara County, and Seattle. No comparison of average unlinked passenger trip length between pipeline and non-pipeline cities could be made for 1987 as a result of this missing data.

TABLE 12--AVERAGE TRANSIT VEHICLE OPERATING SPEED IN PIPELINE AND NON-PIPELINE CITIES

	1984	1985	1986	1987	Percent Change 1984-87
Pipeline Cities	13.73	14.19	14.19	13.85[1]	+0.9%
Non-Pipeline Cities	14.88	14.18	14.86	15.41[1]	+3.6%

RESPONSE TO THE OVERMATCH INITIATIVE: THE RESULTS OF A NATIONAL SURVEY

In order to assess the transit industry's response to the Overmatch Initiative, a survey of 65 transit agencies was conducted in Spring, 1990. This survey asked specific questions about agency projects that had been initiated since the 1984 New Starts policy and the inclusion of local overmatch in response to this policy. In addition, the survey asked subjective questions regarding the agency's perspectives on the subsequent Overmatch Initiative and suggestions for modifications.

DATA ANALYSIS AND METHODOLOGY

A number of transit agencies and others in the transit industry were contacted to gather information on the appropriate format and substance of the survey instrument. It was found that all of those contacted shared a number of perceptions about the status of the Overmatch Initiative. These perceptions, which were included as items on the questionnaire to test their validity, included the following:

1. Good and reliable information is not readily available on required matches.
2. Transit agencies are not responding to the Overmatch Initiative.
3. Where additional local match is provided, it is frequently in the form of a "soft match", e.g., preliminary engineering and design, and R-O-W cost contributions.
4. Transit agencies that have the resources would have overmatched even if the Initiative had not been in place, primarily to avoid delays associated with Federal procedures and oversight.

The survey was sent to the 65 largest transit agencies in the country, with 44 responding (a 70 percent return). The strategy was to survey broadly, i.e., the survey was not limited to those agencies having overmatch experience. The survey contained fifteen questions and focused on the following areas: extent of overmatch experience, amount of local funding, identification of capital construction projects and an evaluation of the Overmatch Initiative (see appendix A).

SURVEY RESULTS AND ANALYSIS

For purposes of this analysis, each question from the survey is presented below along with the results for that particular question.

> **Has your agency initiated or continued implementing any capital projects/undertakings since UMTA's Overmatch Initiative/New Starts Policy of 1984? If yes, identify the project(s), their current stage of project development, and estimated project cost.**

Approximately 56 percent of the respondents had initiated capital projects. Rail projects dominated with approximately 40 percent of those responding identifying a rail project, while 35 percent reported bus projects (see Figures 9 and 10). Approximately 30 percent of the projects currently underway or proposed are station or rail yard construction.

The project development stage was classified into five categories: planning, AA/DEIS, preliminary engineering and design, construction and completion. Of the agencies that responded to this question, 27 percent had projects in the planning stage and another 27 percent reported projects that are currently undergoing AA/DEIS. Preliminary engineering and design have begun on projects in 47 percent of the agencies, while construction has begun on projects in 40 percent. Approximately 27 percent reported projects that have been completed. These percentages add up to more than 100 percent because some agencies listed more than one project and an agency's numerous projects could be in different phases simultaneously.

The smallest project cost estimate was $640,000, while one urban area proposed $900,000,000 worth of projects. The median amount was $102,000,000.00 per project. Approximately 14 percent of respondents had between 50 and 80 percent of project cost paid by the Federal government. The smallest Federal project contribution was 17 percent, the most was 80 percent and the mean was 63 percent. The project with the highest local share had 83 percent, while the lowest was 20 percent. The median was 30 percent.

> **What are the sources of the local share for each capital projects? What kind of overmatch is involved?**

Of the approximately 50 projects identified, the distribution by source of local share was quite evenly distributed--34 percent were State projects, 28 percent regional and 24 percent local projects. Six percent were in special districts and 8 percent in the private sector (see Figure 11).

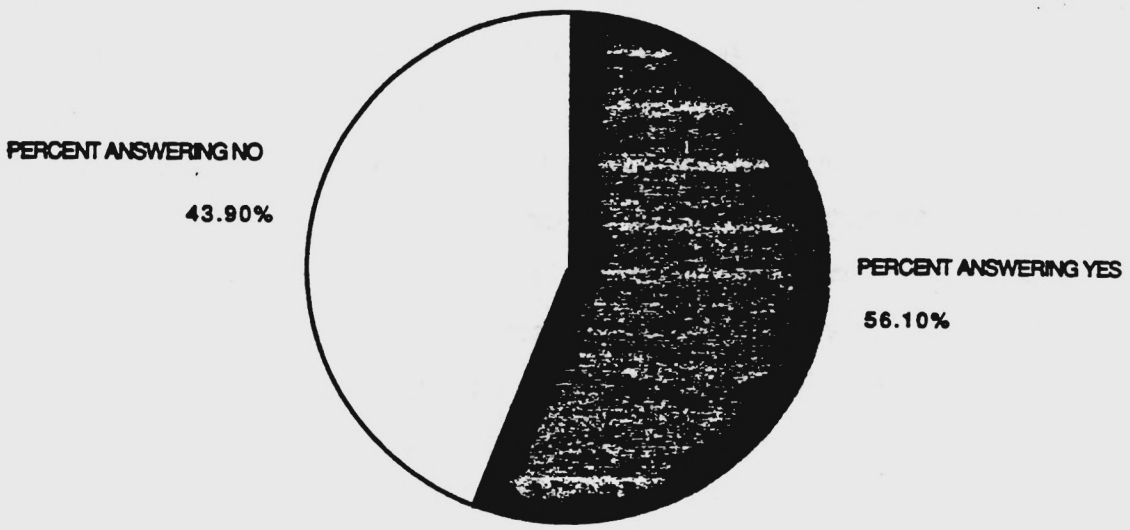


FIGURE 9–CAPITAL PROJECTS

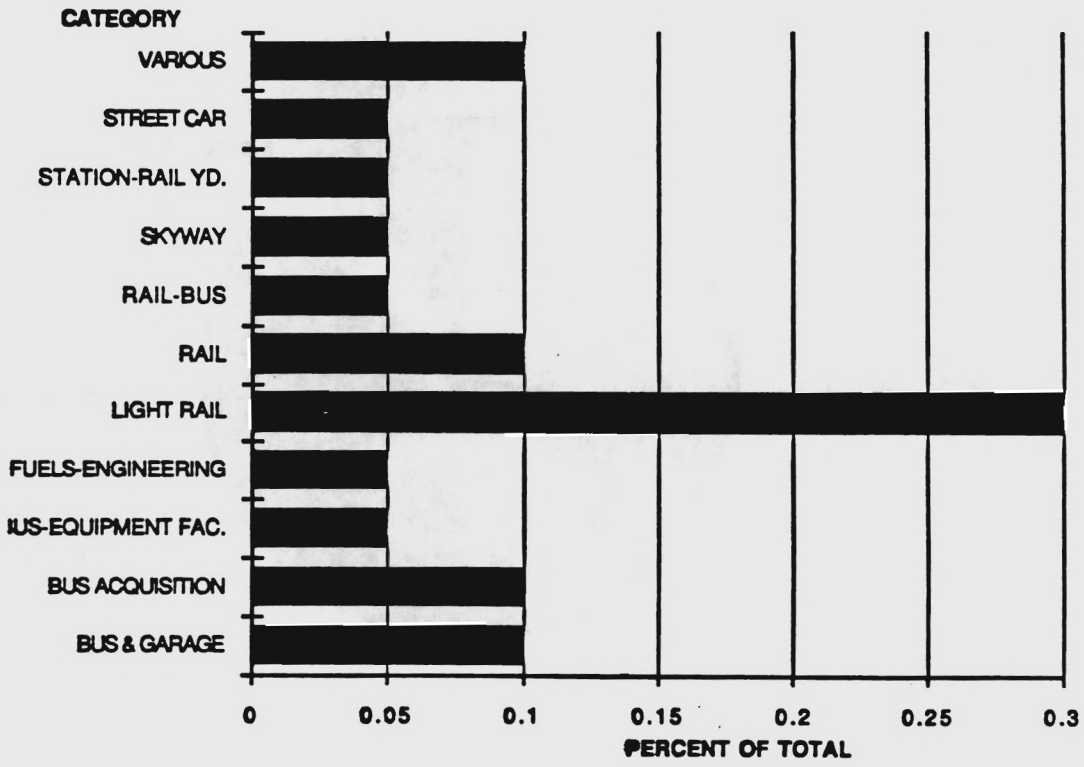


FIGURE 10–PROJECTS UNDERTAKEN/PROPOSED

The respondents reported a wide variety of sources of these local matching funds. The following paragraphs report the major responses that were listed on the survey. In some cases, the revenue sources are generally the same, but it the respondents clearly identified as a special source of revenue, it was summarized as such in this analysis.

At the State level, the overmatch was offered as cash in 53 percent of the cases, 6 percent in 100 percent State-supported construction and the rest was unknown. The largest share of the monies, up to 47 percent, came from the general fund, 18 percent from bonds, 6 percent from sales tax, 12 percent from gasoline tax and 6 percent was unknown.

For those "local" matching funds obtained at the regional level, there were two major funding sources--sales tax (29 percent) and revenue bonds (29 percent). The remaining sources included property tax (14 percent), State gasoline tax (7 percent), administration cost reduction (7 percent), UMTA (7 percent), and public agencies (7 percent).

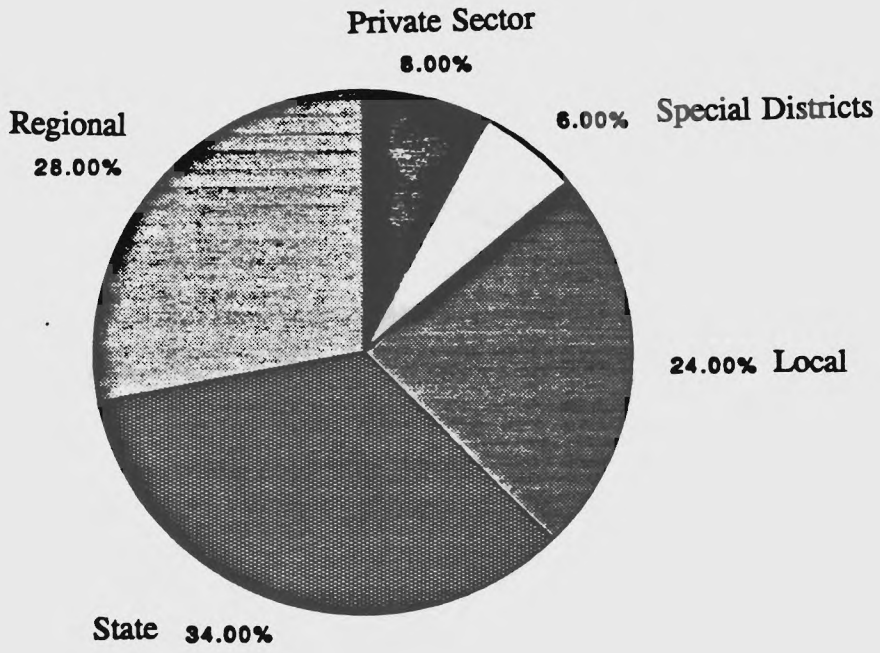


FIGURE 11--SOURCE OF LOCAL FUNDS FOR FIFTY CAPITAL PROJECTS

At the local level, cash contributions constituted 45 percent of the overmatch amount, the rest were in-kind services (18 percent), general funds (9 percent), and tax revenues (9 percent). The funding sources included the general fund (29 percent), beer tax (6 percent), tax increment financing (18 percent), investment returns (6 percent), passenger fares (6 percent), private sector (12 percent) and a valorem tax (6 percent).

The sources of funding for the special districts were sales tax and other special taxes. No information about the form of match was provided.

The private sector match was in many forms: cash, in-kind facilities or land, and others not identified. The sources of funding were listed as a business fund, a cooperative fund between the private sector and local government, and other unidentified sources.

If any portion of the local share is being provided by non-governmental entities, describe the source and amount.

Only 38 percent of the transit agencies responding to the survey answered this question. Of these responding, approximately 76 percent had a portion of local share provided by private sector/developers, the other two major categories being "university in combination with civil groups" and "university" (see Figure 12).

Was this offer initiated by the non-governmental groups or was the support solicited by the transit agency or facilitated by other means such as zoning?

Only 29 percent of respondents answered this question. Of this group, 22 percent indicated that the offer of increased local share was initiated by non-governmental groups. The remaining seven percent indicated that the increased local share was solicited by the transit agency. The vast majority of those responding to this question (71 percent) did not know who initiated the overmatch effort (see Figure 13). It is somewhat surprising that the survey found that non-governmental groups were more likely to initiate the offer of local overmatch, versus governmental agencies. One might have expected that governmental agencies would have initiated the majority of the offers. It is difficult to conclude anything from this statistic given the large number of "unknown" answers to this question.

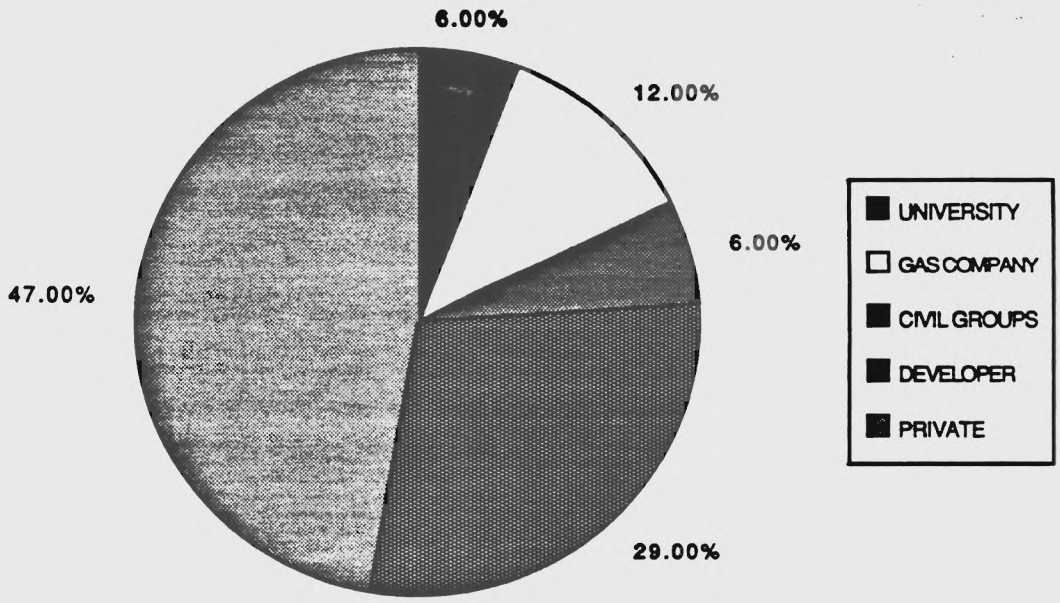


FIGURE 12--SOURCE AND AMOUNT BY NON-GOVERNMENTAL ENTITIES

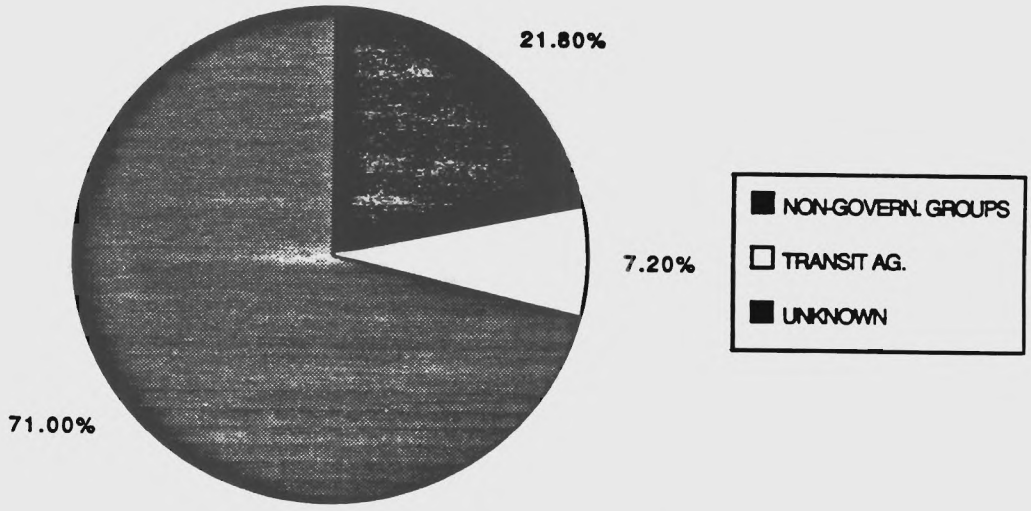


FIGURE 13--LOCAL SHARE OFFER INITIATION

To what extent did you consider the full costs of total system implementation when deciding to apply for Federal money for the initial projects?

Only 43 percent of the respondents answered this question. Of those responding, only 20 percent indicated they considered total project cost. This low level of full system cost consideration seems to indicate that many transit agencies either do not have the capability to provide such consideration, or do not want to adopt such a costing approach.

If you are providing more local share than is required i.e., an overmatch, why are you doing so?

For the agencies responding to this question, the reasons for overmatch funding are listed below. As in previous answers to the survey questions, these reasons are presented as given in response to the question.

- Agency wanted its projects to gain a competitive edge in the funding process (25 percent)
- Agency wanted to reduce the level of Federal funding (25 percent)
- Agency needed the extra Federal money (20 percent)
- The private sector was willing to provide the funds (20 percent)
- Agency wanted greater flexibility (10 percent)

Approximately 35 percent of the respondents to this question wanted greater flexibility or wanted to reduce the level of Federal funding (see Figure 14).

Based on what you have received or heard about UMTA's Overmatch Initiative, how would you describe what this policy is? Do you perceive any difference in the Overmatch incentives if one is considering bus or bus-related projects versus rail modernization?

Almost all respondents were acquainted with the Initiative and understood its intent. However, some felt it should apply only to rail projects. There were no perceived differences in the Initiative whether a new start, bus or modernization project was being considered. Several respondents, in fact, argued strongly that there should not be any difference between the three Tiers. Some example responses to this question are:

"Through an increased local share, limited Federal dollars can be extended to more grantees and to more projects. Also, the policy aims to increase competitiveness between grantees and their productivity; aims to encourage flexibility on the part of localities in terms of the way local match is developed; aims to encourage innovative funding. Among projects funded by discretionary monies, incentives are assumed to be the same."

"This policy attempts to get grantees more involved in financing projects locally by increasing the local match requirement from the minimum 25 percent. It may be easier to attract private investors to rail, and new start projects, because of the "glamour" of these efforts"

"The Overmatch Initiative separates the have's from the have-not's. It pits large, well-fudned systems against smaller, less financially-able systems for a share of the shrinking Federal dollar."

"Overmatch advances the a grant proposal when a match is in excess of 25 percent. The greater the local match, the higher priority the proposal will receive from UMTA. Bus related projects appear to be more difficult for which to obtain funding through overmatch."

"Overmatch incentives are considered absolutely necessary in new starts and rail modernization."

"The policy appears to establish a "bidding war" for discretionary transit funds."

"The Overmatch Initiative is geared to stretching shrinking Federal dollars allocated to mass transit. Perceive that Overmatch incentives would be more necessary in new starts and rail modernization than bus-related projects."

"UMTA appears to concentrate on new start projects in this policy"

"We see it as a misguided public policy to reward the rich at the exclusion of good projects."

"It's a policy to encourage a higher local jurisdiction financial participation than before. Rail projects are typically more capital intensive with lower operating costs than bus. Overmatch should not apply to bus."

"Policy is intended to leverage as much non-Federal investment in transit capital projects as possible by according priority to overmatched projects in discretionary funding decisions and by giving grantees added program flexibility."

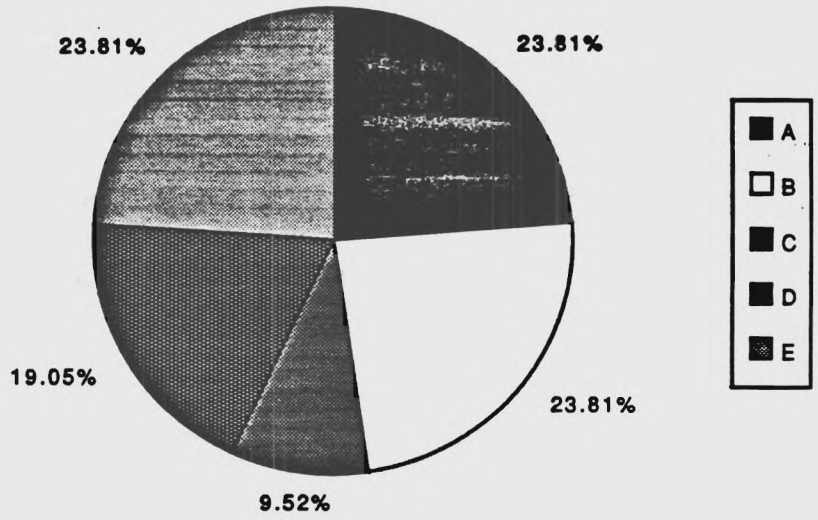


FIGURE 6. REASONS FOR OVERMATCH, UMTA OVERMATCH SURVEY

A = because agency needs the extra federal money.
B = because agency wanted to gain a competitive edge.
C = because agency wanted greater flexibility.
D = because private sector willing to provide funds.
E = because agency wanted to reduce level of federal funding/involvement.

FIGURE 14--REASONS FOR OVERMATCH

What, in general, is your assessment of the Overmatch Initiative?

It is generally felt the Initiative is biased on behalf of larger and financially secure municipalities. Although many agencies felt strongly that the Initiative was not good policy, several did think it was a sound strategy for securing local investment. Many respondents, however, agree that the implementation of the Initiative has been poor. Excerpts from the answers to this question include:

"It is a good policy assuming there are fewer "Federal strings" attached."

"We are concerned that the preference for private over public overmatch contributions will arbitrarily favor wealthy commercial districts. If the goal is the lowest net project cost, then any distinctions are not appropriate and counter-productive in creating viable financing plans. We have similar concerns regarding distinctions between in-kind and cash contributions."

"An effective way to transition transit properties towards a reduced dependence on Federal funds."

"It has been effective in leveraging Federal dollars further than in the past and in encouraging grantees to commit more local funds to their transportation projects."

"Effectively provides grants to highest bidder but may reduce the number of new grant requests."

"Read my lips---raise local taxes"

The overmatch policy is unfair and does not recognize variations in funding schemes and formulas from state to state. Basically, those systems with dedicated funding stand a better chance of providing an overmatch and receive funding."

"Tends to favor areas with healthy economies which can afford large local commitments. From UMTA's viewpoint, it does stretch Federal funds and may induce greater local investment. Overall, it is a worthwhile intitiative, so long as poorer aeras can still get their minimum needs met."

"The Initiative is an inappropriate application of the "survival of the fittest" business philosophy to a public service that is established to promote the general welfare of the people. A system is able to overmatch Federal funds would appear to have excess local funds and should not be given priority over the poorer systems that need the Federal funding."

"It can be helpful, yet realistically, it may not be a long-term solution. Different states have different political subdivisions on transit and can be adversely affected. Also, states can't always afford funding the overmatch due to fiscal constraints."

Have you generated activity as a result of the New Starts Overmatch Policy or has your agency generally adopted such a policy all alone?

Forty three percent of the transit agencies did not answer this question or had no opinion. Only 5 percent claimed to have generated activity as a result of the Overmatch provisions of the New Starts Policy. The remaining 52 percent initiated projects without considering overmatch. However, of these transit agencies, 23 indicated a strong interest in how to generate an overmatch. Therefore, the results suggest many agencies do not know appropriate ways of applying for overmatch or of generating overmatch funds.

What changes in the Overmatch policy would you recommend?

Responses to this question were sharply divided. In order of frequency, the proposed changes are as follows:

- no changes (21 percent)
- eliminate the program (18 percent)
- set a standard match (9 percent)
- consider current commitment to mass transit (6 percent)
- reduce competition among agencies (6 percent)

Other suggestions included: provide a clearer policy statement, provide a definitive review process tied to percentages, ensure that requirements are consistent with the amount of funding that is available, fund only those projects that are recommended by AA/DEIS, set a visible "mark" level, offer more guidance and promulgation, apply overmatch only to programmatic overmatches, decrease increments used to evaluate projects, expand definition of "UMTA project," remove the requirement that funds must already be in place, promote competition only among similar projects, and consider need.

Do you think the Overmatch policy is equitable? Why or why not?

Approximately 19 percent of the respondents feel the policy is equitable, while 56 percent feel it is not. This response is related to the perception that only wealthier municipalities benefit from the policy (see Figure 15).

Do you think the Overmatch policy is efficient? Why or why not?

Twenty-four percent of respondents feel the policy is efficient, while 33 percent feel it is not. The most common response was that the policy did not result in the efficient selection of projects (see Figure 16).

What kind of incentive can be added to encourage use of the Overmatch Initiative?

Again, opinion on this question was sharply divided. The most common responses are as follows:

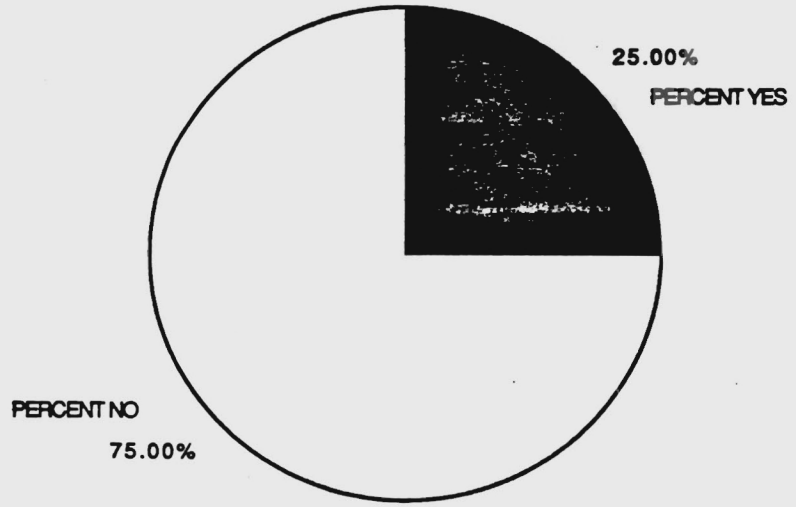


FIGURE 15--EQUITY OF OVERMATCH POLICY

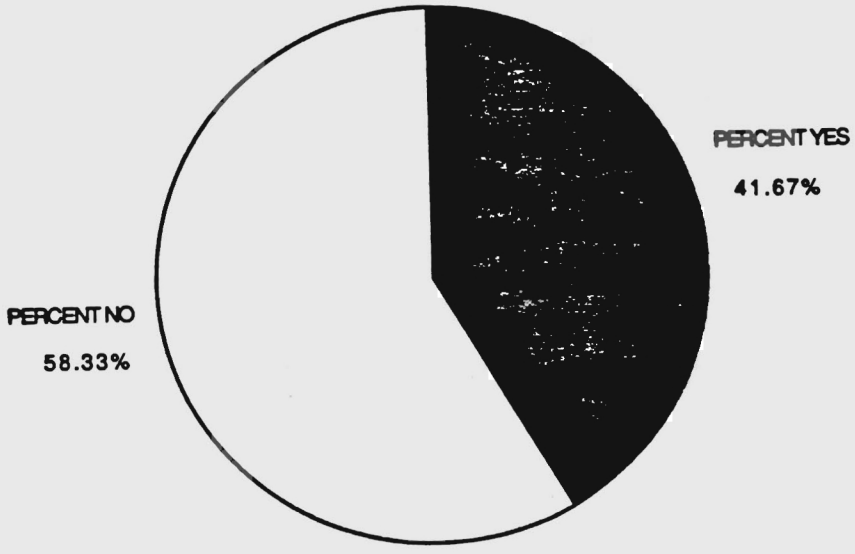


FIGURE 16--EFFICIENCY OF OVERMATCH POLICY

- not possible to add any incentives to encourage use of overmatch (24 percent)
- streamline the process (17 percent)
- give overmatch projects greater priority in the ranking system (7 percent)
- expand the definition of "UMTA project" (7 percent)

Other recommendations include: providing a more standardized application of overmatch funds, reducing the amount of Federal non-monetary involvement, speeding up the funding process, providing a clearer definition of objectives, increasing the amount of operating assistance from UMTA, reducing the funding increments, encouraging competition only after Section 3 money has been equally distributed among the states, offering grant awards, allowing incentives to develop naturally as federal funding becomes more scarce, using overall capital expenditures as a basis for the decision, adopting a formula base, and guaranteeing funding for a specific level of overmatch.

What problems have you encountered in implementing the Overmatch policy?

Thirty-five percent of the agencies that answered this question have had no problems with the implementation of overmatch. Another 35 percent of the agencies have encountered difficulty in finding the money to provide an overmatch. Thirteen percent of the agencies report that the process lacks definition and can be confusing. Other problems include: slow review of AA/DEIS, Federal role in Federal projects not dominant, artificial division of budget and accounting to create an acceptable project, and a bias for rail projects.

CONCLUSIONS

The responses to the survey reflect diverse opinions about the Overmatch policy. The perceptions that were identified in the preliminary phase of the project were confirmed through the survey of the agencies. Agencies do not, in fact, appear to have good information on what is required of the local overmatch and the local match is frequently met through "soft match". This is particularly true for the private sector contributions. Lastly, there is some indication that those local areas able to do so would overmatch anyway to achieve greater flexibility and minimize Federal government involvement.

Overmatch funding is originating almost equally at the State, regional and local level with some occurrence in special districts and from private sector contributions. At the State level, over 50 percent of the matches are in the form of cash while this is less true at the regional and local level. The form of match for the private sector is mainly in-kind and donated facilities.

Private sector/developers were the largest source of overmatch share at the lcoal level. Of those answering the question, non-governmental groups played a more important role in intitiating the overmatch offer.

The majority of respondents, 56 percent, are not providing overmatch. Of those doing so, the majority are using overmatch because of the competitive edge in the funding process and to reduce Federal funding/involvement. Only 22 percent of respondents consider total system costs during the planning process.

The intent of the Overmatch policy was reasonably well understood. However, there was speculation that the intent was not being accomplished adequately. It is generally felt that the policy is biased on behalf of larger, wealthier cities and it is therefore not equitable. Respondents also indicated that the policy does not result in more efficient project selection.

Only a small percentage of respondents have generated activity as a result of the Overmatch Policy. The majority of respondents, 52 percent, did include a larger local share without considering the official Policy. As might be expected, approximately 35 percent of the respondents indicated that their major problem was an inability to generate additional funds to provide an overmatch.

CASE INVESTIGATIONS OF SIX METROPOLITAN TRANSIT SYSTEMS

The results of the national survey, and conversations with UMTA officials, led to the identification of six transit systems or metropolitan areas that could seemingly provide interesting insights into the dynamics of the Overmatch Initiative. These transit systems or metropolitan areas were Atlanta, Baltimore, Denver, Houston, Los Angeles, and San Francisco. As noted in the opening section of this report, each of these cases was chosen for a special reason. Atlanta was chosen for its successful pursuit of Federal funds in the expansion of the MARTA system, which included local overmatch provisions. Baltimore was selected because of the construction of an extensive light rail line through the region which was to be funded primarily by non-Federal funds. Denver was included because it did not have an official Overmatch project, but was definitely trying to participate in the program. Houston was an important site because of a promised private sector contribution toward the construction of a light rail line. Los Angeles was included because it was the first major investment project which include an overmatch in its full funding agreement with UMTA. In addition, the private sector contribution which was to occur through benefit assessments became embroiled in legal challenges and thus shows 7the uncertainties that can be associated with a diverse range of local funding sources. San Francisco proposed a regional rail plan consisting of numerous rail facilities, each having differing Federal shares, but in total having a very low overall Federal participation.

MARTA'S AGGRESSIVE EXPANSION OF THE TRANSIT SYSTEM

Ever since a 1971 referendum provided local sales tax revenues from Fulton and DeKalb counties, the Metropolitan Atlanta Rapid Transit Authority (MARTA) has been aggressively building and expanding one of the nation's newest and most effective rapid transit systems. Much of this expansion has been funded with local funds. As such, MARTA becomes an important case for this research.

Background

Atlanta has developed one of the nation's finest mass transit systems in the country. The two most populous counties in the region, Fulton and DeKalb, are served by the MARTA whose 36 mile subway system and fleet of over 800 buses provide excellent public transportation service in the metropolitan core. The long-range plan for the MARTA system includes 60 miles of rail with 45 stations, consisting of five rail branches. The subway system has received strong support from public officals and from the business sector, which has viewed the system as a way of maximizing development opportunities in the region. The excellent service provided by the region's transportation system was repeatedly pointed to by several officials interviewed for this case study. Mr. George Berry, Commissioner of the Georgia Department of Industry, Trade, and Tourism said that "Atlanta is now experiencing the best level of mobility it has for a long time due to a combination of MARTA and freeway expansion." Mr. Jerry Bartels, Executive Director of the Atlanta Chamber of Commerce argued that the excellent transportation system contributed to Atlanta's image as a growing, progressive city. He stated that "transportation is a major selling point for Atlanta----the airport is most important, followed by the freeway system, MARTA, and the rail system." In addition, Mr. Bartels stated that the recent choice of Atlanta to host the 1996 Olympics was in part influenced by the excellent transportation infrastructure in place in Atlanta. MARTA officials played an important role in providing a strong transit plan for the Olympics. Mr. Floyd Hardy, Deputy Commissioner of the Georgia Department of Transportation agreed that the excellent transportation system has given a very positive image to the city. He noted that "access to the central business district via transit or freeway is better than ever before." He attributed this to the foresight of local officials in

anticipating future problems and putting in place the necessary transportation infrastructure to deal with them. Dan Sweat, President of the Central Atlanta Progress (at the time of the interview) and Houshang Farhadi, Director of Planning at John Portman and Associates, one of Atlanta's largest developers, agreed that the regional transportation system keeping pace with growth has been an important component of the region's phenomenal growth over the past several years.

In summary, the Atlanta region has experienced rapid growth over the past ten years and is expecting even more over the next 20. A regional rail system has been put in place that serves the transportation needs of the fast-growing region. Both public officials and private sector representatives acknowledge the important role that the excellent transportation system has had in supporting this growth.

Funding

The MARTA system expansion was one of two systems that received a "high" rating for capital overmatch in the 1985 UMTA 'New Starts' evaluation. This rating was symptomatic of the financing strategy adopted by MARTA for expanding the base rail system. In several instances, as will be seen below, MARTA made an explicit decision to use local funds, in place of, Federal funds to expedite rail project construction. MARTA officials identified eight projects that have been in some phase of project development since the 1984 New Starts policy. These projects, along with the funding shares are:

Project Title	Project Stage	Project Cost
College Park Segment/Station	Open 6/88	Total: $111.85 M Federal: 5.2% Local: 94.8%
Chamblee Segment/Station	Open 12/87	Total: $131.6 M Federal: 20.3% State: 79.9%
South Yard and Shops	Open 6/88	Total: $53 M Federal: 46.2% State: 53.8%

Airport Segment/Station	Open	Total: $43.4 M Federal: 53.9% State: 46.1%
Doraville Segment/Station	Construction	Total: $126.7 M Federal: 63.3% State: 36.7%
East Line Extension	Construction	Total: $170.7 M Federal: 68.8% Local: 31.2%
Bankhead Segment/Station	Construction	Total: $48.9 M Federal: 0% State: 100%
North Atlanta Corridor	Construction Alts. Analysis	Total: $717 M Federal: 52.2% State: 48.8%

The high levels of local funding were, in essence, strategies of necessity. MARTA was unable to obtain a full-funding contract for the entire expansion that is represented in the above eight projects. MARTA therefore had to rely on Letter of No Prejudice and annual Congressional appropriations. It was found that this style of project funding caused delays and associated costs due to inflation. To maintain the construction schedule, MARTA decided to use a greater share of local funds. The Bankhead project stands out as having 100% local funds. This funding approach was adopted because MARTA officials did not feel that the project would have been competitive for Federal funds. The final project, currently underway, was started with local funds because it is being built in conjunction with a state highway and thus could not be delayed.

The funding source for this local capital is a dedicated one percent sales tax passed in 1971 in Fulton and DeKalb Counties. Although a recent slowdown in the metropolitan economy has slowed the pace of sales tax revenues to MARTA (and was the reason for a fare increase in 1990), it is expected that the sales tax revenues will be the predominant local source of funds well into the 21st Century. In the last project listed above, right of way and land donations have been proposed by local developers in exchange for access to proposed stations. In addition,

under State law, local property owners can form a Community Improvement District which allows additional taxes to be raised and dedicated for some special purpose. Such a District was being proposed by a group of developers and MARTA officials contacted them to see if the new subway extension could be a beneficiary of some of these funds. An estimated $10 million could be provided to the project.

Overmatch Initiative

MARTA was one of the few agencies that identified specific funding activities that could be related to the Overmatch Initiative, these being the pursuit of private funding as part of the North Line extension. However, even with this response to the Initiative and given that MARTA had provided larger-than-required local shares before, MARTA officials still had some serious concerns with the UMTA policy. MARTA officials expressed concern with a perceived UMTA preference for private over public overmatch contributions. The consequence of this preference, according to MARTA officials, would be a favoring of wealthy commercial districts over poorer areas. If the goal is lowest net project cost, there should not be any preference given to the sources of funds. To do otherwise creates unnecessary complications in developing financing plans. Similarly, MARTA officials disagreed with the distinction between in-kind and cash contributions. Obtaining land contributions is often the easiest way and, in MARTA's experience, the only feasible way to secure private contributions for a project. In addition, if the in-kind contribution offsets a real cost of a project, then why should it count any less than any other contribution which reduces the net project cost? The final observation from MARTA officials was a question of why transit seems to have been singled out of all Federal programs for variable local matching requirements.

BALTIMORE CENTRAL LIGHT RAIL TRANSIT PROJECT

The Baltimore Central Light Rail Project provides an illustration of an ambitious, four-staged strategy to construct a 27-mile light rail system through the Baltimore region. Local transit officials state that project development was considered in light of the Overmatch policy to obtain expedited Federal review of documentation. As such, the Baltimore case shows how the Overmatch policy was designed to work.

Background

The Maryland Mass Transit Administration (MTA) constructed and opened to operation Baltimore's first heavy rail line during the 1980's. This subway line was the product of the normal UMTA project review process with an 80% Federal match. A six-mile, $160 million extension of this subway opened in 1987, a project that was funded with Interstate transfer funds at an 85% Federal participation. Another extension is to open in 1994; again funded with Interstate transfer funds at an 85% Federal matching ratio.

A light rail line through the central Baltimore region had been proposed by transit advocates for many years. In 1987, a feasibility study showed that such a transit line did make sense. The Governor subsequently proposed such an undertaking to the Legislature in 1988 and received Legislative approval that same year. The MTA did not submit the project proposal to UMTA because such a submittal was expected to result in long time delays in obtaining Federal approval.

The Central Light Rail Transit project extends 27 miles through the center of the Baltimore region and has a total of 37 stations (see Figure 17). The project has been divided into four segments: a 21-mile Central segment which is located entirely within the City of Baltimore, a two-mile South segment which extends from the city boundaries to terminals in Anne Arundel County, a four-mile North segment which extends from the city boundaries to terminals at Hunt Valley in Baltimore County, and a one-half mile extension to Penn Station in central Baltimore. The alignment will be located primarily within existing railroad right-of-way except at BWI Airport, in downtown Baltimore, and in the Hunt Valley business community. The final system is estimated to have a daily ridership of 33,100 people.

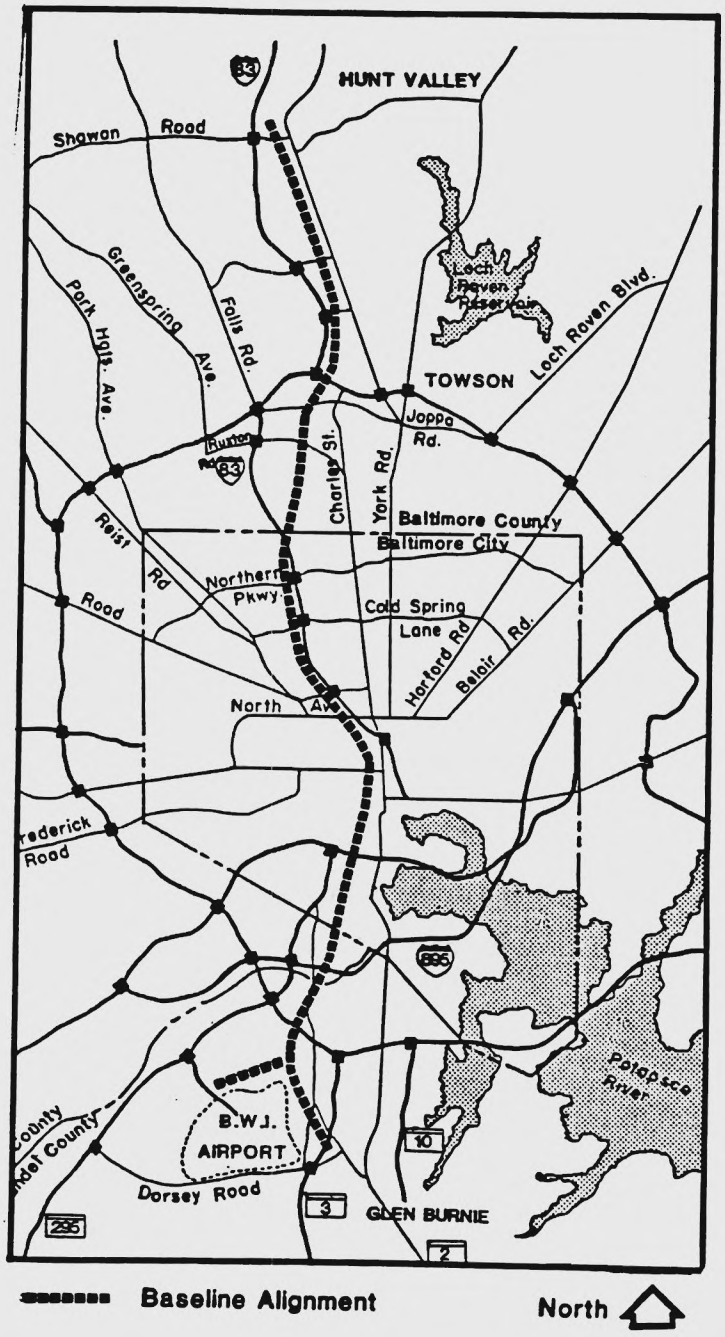


Figure 17--Baltimore's Central Light Rail Project

The Central segment is currently under construction with one-half of the line expected to be open in May, 1992. The Draft Environmental Impact Statement for the North segment is finished with an expected line opening of late 1992. Both the South segment and the Penn Station extension are in the latter part of the Alternatives Analysis/DEIS stage and are expected to open in 1993. As can be seen in these target dates, the MTA has established an ambitious schedule for implementing this light rail line. If these dates are held, the entire line consisting of four separate projects, will have been completed in only six years.

Funding

The funding distribution for these four projects is shown in Table 13. Note that although three of the projects use a 75% Federal share, the biggest project costing $364 million was funded without Federal funds. The net result for the entire project is a Federal share of 60.5 million out of a $464 million project, or a 13.25% Federal share. Approximately $340 million of the state/local share will come from the State Transportation Trust Fund which consists of revenues collected from all sources of transportation fees and taxes, e.g., road tolls, vehicle registration fees, gasoline taxes, transit fares, etc. This Transportation Trust Fund is used to fund all capital, operating, and maintenance expenses for transportation systems across the state. Each modal agency in the State department of transportation presents each year a separate modal budget to the Secretary's Office which then develops a comprehensive DOT budget across all modes.

In addition to the State funding, three local jurisdictions are for the first time contributing non-Transportation Trust Fund revenues to a public transportation project. Some small contributions to station construction costs are expected from the private sector. One local developer has committed close to $300,000 toward construction costs for a station that abuts their property. MTA officials stated that the most likely private sector contribution to the transit system will be to lease or rent MTA space, thus providing operating income to the agency.

TABLE 13--MTA PROJECTS IN BALTIMORE UNDERTAKING

Project	Stage	Funds
Central Segment	Under Construction Half Open in 1992	$364 M 0% Fed Share
North Segment	Open Late 1992	$47 M 75% Fed Share
South Segment	Open 1993	$24 M 75% Fed Share
Penn Station Ext.	Open 1993	$11 M 75% Fed Share
Total Cost		$464 M
Federal Share ($)		$61.5 M
Federal Share (%)		13.25%

Overmatch Policy

MTA officials expressed great satisfaction with the way the Overmatch policy is being implemented in the Central Light Rail project. The MTA has experienced faster-than-expected UMTA review of MTA documentation which is attributed to the Overmatch Policy. UMTA Administrator Dellibovi sent a letter to the MTA saying that UMTA would, in fact, expedite the review of the AA/DEIS's for the three projects subject to Federal oversight. MTA officials feel that this commitment is being met. Overall, although Baltimore has had a favorable experience with the Overmatch Policy, MTA officials are still unclear how important the Overmatch is, or should be, when facing a situation where one clearly superior project competes with a project that provides a better local financial commitment.

DENVER REGIONAL TRANSPORTATION DISTRICT

At the time of the interview, Denver had not received approval from UMTA to proceed with Alternatives Analysis or to fund a new start project with Federal participation. This case study was included in the analysis because it represents the "non-participants" in the Overmatch policy.

Background

The Denver Regional Transportation District (RTD) has been embroiled for many years in local controversy over the appropriate direction of transit policy in the Denver metropolitan area. A disagreement over the type of transit system, and for that matter the institutional structure for managing the entire metropolitan area's transportation system, has been debated extensively over the past ten years. In the midst of this debate, the RTD has proposed to construct some high capacity facilities and to study others. The RTD has three projects that it considers fits into the Overmatch policy category. The first is an HOV lane in the North Corridor which is expected to be open in 1992. The project cost of $200 million is split 35% Federal and 65% local. Because of the construction of a new airport to the northeast, a feasibility study is currently underway to construct a rail connector from downtown to the new airport. This project, if constructed and opened in 1994, is expected to cost about $210 million, with no Federal participation. The final projects are two Alternatives Analyses in the Southeast and Southwest corridors. The RTD told UMTA officials that these latter two Alternatives Analyses could be part of an Overmatch project with Federal participation somewhere in the range of 25% to 35%. This low level of Federal participation was designed to obtain UMTA approval to conduct two Alternatives Analyses at the same time. Approval was not given.

Funding

The three projects described above are to receive funding from several funding sources. Of course, without knowing the exact nature of the preferred alternatives if the Alternatives Analyses were, in fact, conducted, one cannot say that these funding sources are sufficient to provide the required local match. The State will contribute $69 million from a highway fund program, the City of Denver will contribute $23 million from general revenues, and the RTD will contribute $38 million from a dedicated local sales tax. In addition, the State Legislature

has provided local communities with the capability to collect a number of taxes:

1. A maximum assessment of $0.40 per square foot per year from all businesses occupying 10,000 or more square feet of space is allowed under current legislation. The actual current assessment is maintained at $0.10 per square foot per year. This will likely increase if and when a project is approved for construction.

2. A maximum head tax of $2.00 per employee per year charged to both employees and employers, excluding businesses such as hospitals. This is currently not collected.

3. Value capture provisions may be instituted along the corridor.

4. Other possible tax sources include leasing, telephone and hotel taxes, one of which have yet been implemented.

It is expected that special taxing districts, one which already exists at the Denver Technology Center, would also be asked to participate.

Overmatch Policy

RTD officials, at the time of the interview (April 1990), questioned whether there was an official Overmatch Policy. Repeated inquiries to the UMTA Regional Office suggested that there was such a policy, but that nothing could be determined until the policy guidelines were received. This uncertainty created some problems for RTD in that funding agreements with the City and State were negotiated with the understanding that an Overmatch policy would in fact be in place. Perhaps because of the uncertainty associated with the definition and scope of an Overmatch policy, RTD officials were somewhat more negative about the prospects and implications of the Overmatch policy on national transit policy. There was a feeling that the policy is not equitable in that "richer" communities would be able to "buy" Federal support more easily than communities with lesser means. Although the Overmatch policy was designed to expedite project approval, there was some feeling that the different funding sources that are often needed to provide an Overmatch package often complicates bookkeeping and makes final funded amounts somewhat less certain, and therefore more risky. The RTD also felt that the language associated with an Overmatch policy should clearly define the benefits to the local communities of adopting such an approach.

HOUSTON METRO'S LIGHT RAIL LINE

The Metropolitan Transit Authority of Harris County (Houston Metro) is constructing an impressive system of regional HOV lanes that will connect the entire region to the major activity centers in the metropolitan area. As part of the Metro strategy, a light rail line (known as the "System Connector") was to be built connecting the downtown to major activity centers in the urban core. The System Connector became the focus of intense local debate and still today the decision has not been made to proceed with some form of rail line. This debate, and the provision of substantial private sector funding, make the Houston case an important case investigation for this research.

Background

In August, 1978, by a 60 percent majority, the voters of Harris County created the Metropolitan Transit Authority of Harris County (METRO) and funded it with a one percent sales tax. A transit plan had been presented to the voters which included radial transitways, park-and-ride lots, bus vehicles and facilities, and consideration of "automated guideway or rail transit". In response to this favorable vote, METRO developed a proposal that included a $1.4 billion, 18.2-mile heavy rail system. This proposal was rejected in a referendum in 1983. After a two-year restudy of the future of transit in Houston, the METRO Board adopted a Regional Transit Plan in 1986 that included many of the same proposals as the previous plan, but this time included a rail system connector that was to connect downtown Houston with three major activity centers nearby (see Figure 18), and a general mobility program that was to be funded with 25 percent of the METRO's sales tax revenues.

The System Connector was taken into a formal Alternatives Analysis process and a locally preferred alternative had been selected. However, in 1989 the METRO Board, in response to several national reports that cast doubt on transit ridership and cost forecasting approaches, decided to reexamine the System Connector proposal. This reexamination resulted in a very controversial METRO Board decision to not build a rail System Connector, a decision that was overturned shortly thereafter when a new Board chairman was appointed by the mayor of Houston. However, enough criticism of the original System Connector proposal had surfaced

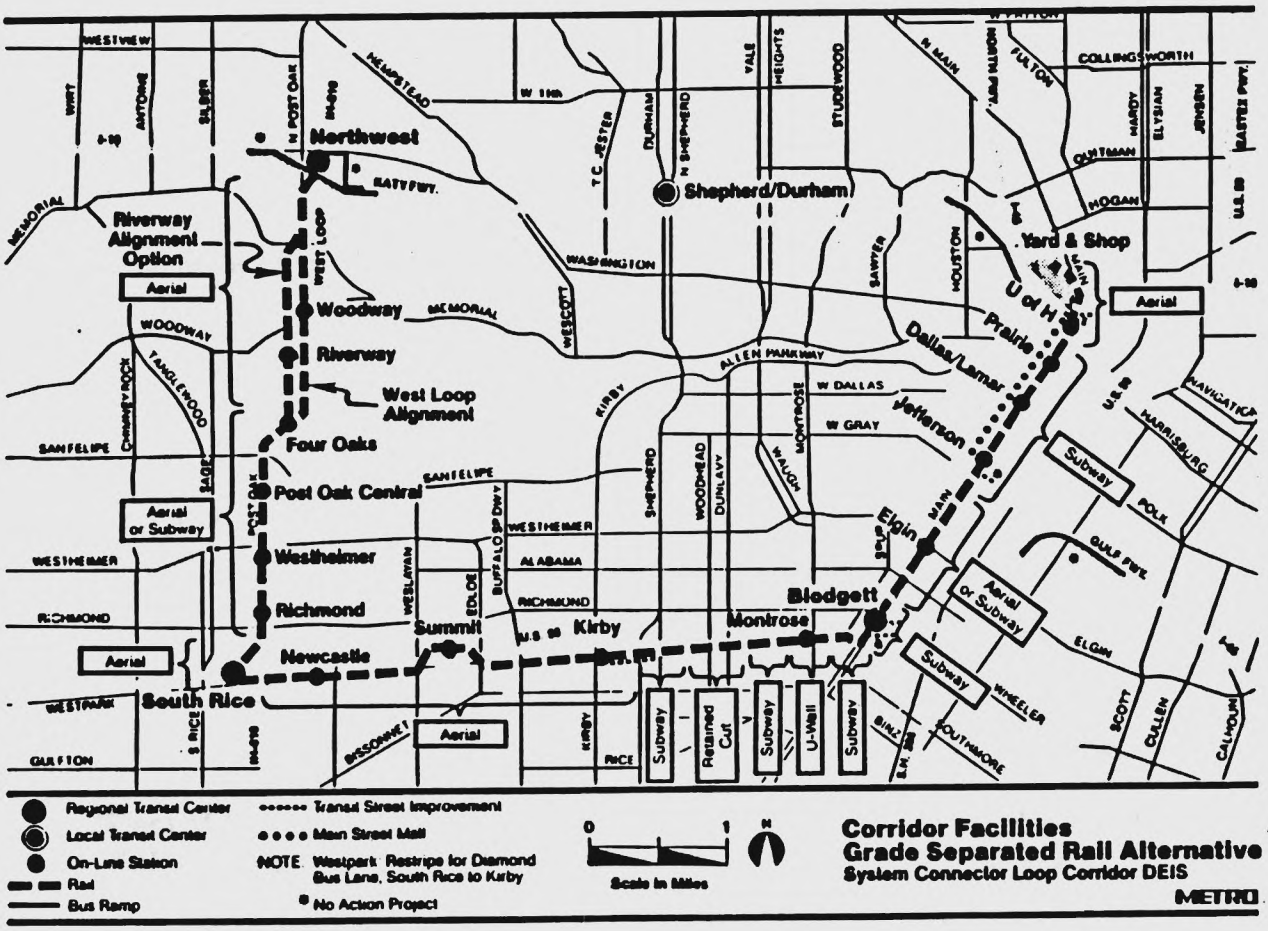


Figure 18--Houston's System Connector

from this review that METRO decided to once again look at different System Connector configurations. METRO is under some pressure to identify a locally preferred alternative having general consensus before Spring, 1991. The funds for this rail proposal have been "set aside" in Congressional appropriations, and if an acceptable proposal is not identified by then, local officials fear that these funds might disappear.

Funding

METRO has entered into overmatch agreements with UMTA on projects that were initiated even before the New Starts policy. However, all of these projects were the result of Congressional "earmarks", that is, specific Congressional directions to UMTA to fund certain projects. These projects have included:

Project	**Project Stage**	**Funding--UMTA State METRO**
Northwest Transitway	Complete	$67 M (64%) $7 M (7%) $30 M (29%)
Southwest Transitway	Construction	$64 M (66%) $15 M (15%) $19 M (19%)
North Freeway Transitway	Design	$49 M (68%) $22 M (32%)
Mission Bend Park & Ride	Design	$3.7 M (54%) $3.2 M (46%)

METRO expects to receive half of the $1.4 billion needed to build the System Connector from the Federal government. The remaining local portion was to be supported mainly from the sales tax ($185 million in FY 1989), state funds, passenger revenues and from private sector support. The total private sector contributions through FY 2000 were assumed to be $130 million in constant 1988 dollars. This private sector contribution was to be obtained through assessment districts, voluntary contributions, and land donations. METRO staff conducted numerous financing scenario analyses to gauge the risk to the Authority and its other services

of different System Connector configurations. An example of such a scenario analysis is shown in Figure 19. Note in this Figure that the bottom line issue to METRO was the net change in its retained earnings. Through such an analysis, METRO was able to determine that several proposed System Connector alternatives did not meet a financial solvency test for METRO itself.

The use of private sector contributions in the financing of the System Connector presented several challenges to its evaluation. The most important issue was in what form and at what magnitude was this contribution to be made. The $130 million contribution as a figure that had been arrived at through negotiations between a key METRO official and key business representatives. No one, however, knew what this contribution meant, was it donations? cash contributions? In addition, subsequent to the agreement on $130 million, several private sector representatives mentioned publicly that their understanding of this contribution was that it was not estimated in constant dollars. As noted by one representative, whenever the rail system was opened, $130 million was to be contributed. METRO officials, on the other hand, argued that the $130 million contribution was, in fact, in constant dollars so that when the contribution was due, it would have to be inflated. This issue apparently has not yet been decided.

METRO has issued an RFP for the overall project management of the System Connector project and included in the RFP a requirement for the successful firm to assure a minimum $130 million contribution from the private sector. At least one responding firm to the RFP claimed that this level of private sector donations would be fairly easy to obtain through right-of-way donations, lease arrangements, and assessment districts. However, no firm commitment was made in guaranteeing this level of contribution.

Overmatch Policy

METRO officials generally supported the Overmatch Initiative because it "encouraged the leveraging of limited Federal transportation funds by giving those projects with substantial local financial commitments funding priority." Although METRO has not officially participated in UMTA's Overmatch program, it was METRO officials' opinion that one of the reasons why Congress was willing to earmark funds for the Houston system was a significant greater local contribution to the overall cost of the projects.

MODEL - METRO FINANCIAL ANALYSIS
OPERATING SUBSIDY FORMAT
GAAP ACCOUNTING - MODIFIED (ASSETS ASSUMED TO HAVE NO SALVAGE OR RESIDUAL VALUE)
ALL DATA STATED IN FISCAL 1988 CONSTANT DOLLARS, SEE SPECIAL ASSUMPTIONS
$ 000'S OMITTED

MODEL GENERAL ASSUMPTIONS
FISCAL 1989-2000 - PERIOD OF ANALYSIS

- HIGH COST GRADE SEPARATED RAIL FROM THE AA/DEIS SUBMITTAL PLUS AT GRADE TMC/SETC/ASTRODOME RAIL LINE
- ALL CONSTRUCTION COMPLETED BY THE YEAR 2000
- GENERAL MOBILITY EXPENDITURE RATE = 25% OF SALES TAX RECEIPTS
- RESIDUAL VALUE OF ASSETS = 0 WHEN FULLY DEPRECIATED; LAND COST IS EXCLUDED; STRAIGHT LINE, HISTORICAL COST: USEFUL LIVES=
  BUS: 10 YEARS — OPERATING FACILITIES: 40 YEARS
  TRANSITWAYS: 20 YEARS — OTHER: VARIES
  RAIL SYSTEM: 30 YEARS

OS-5 7/7/89

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY2000	FY2001	FY2002	TOTAL
OPERATING INCOME:															
BUS FARES & REVENUES	37,120	39,170	45,070	47,720	53,990	57,200	64,160	67,650	74,870	79,870	87,860	87,720	0	0	742,400
MISCELLANEOUS & OPERATING GRANTS	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	1,040	0	0	12,480
SUBTOTAL	38,160	40,210	46,110	48,760	55,030	58,240	65,200	68,690	75,910	80,910	88,900	88,760	0	0	754,880
LESS OPERATING EXPENSES:															
DEPARTMENTAL & SUPPORT OPERATING COSTS	(134,820)	(138,520)	(143,560)	(149,360)	(158,130)	(161,120)	(165,390)	(168,850)	(178,060)	(185,490)	(194,670)	(198,430)	0	0	(1,976,400)
DEBT EXPENSES	0	0	0	0	0	0	0	0	0	(3,300)	(7,590)	(8,230)	0	0	(19,120)
SUBTOTAL	(134,820)	(138,520)	(143,560)	(149,360)	(158,130)	(161,120)	(165,390)	(168,850)	(178,060)	(188,790)	(202,260)	(206,660)	0	0	(1,995,520)
DEPRECIATION & GAIN/LOSS ON DISPOSAL OF FIXED ASSETS	(31,952)	(33,862)	(36,492)	(40,915)	(44,225)	(47,033)	(51,652)	(56,069)	(91,625)	(102,433)	(107,185)	(118,551)	0	0	(761,994)
SUBTOTAL	(166,772)	(172,382)	(180,052)	(190,275)	(202,355)	(208,153)	(217,042)	(224,919)	(269,685)	(291,223)	(309,445)	(325,211)	0	0	(2,757,514)
EQUALS OPERATING SUBSIDY	(128,612)	(132,172)	(133,942)	(141,515)	(147,325)	(149,913)	(151,842)	(156,229)	(193,775)	(210,313)	(220,545)	(236,451)	0	0	(2,002,634)
LESS MOBILITY COMMITMENT:															
GENERAL MOBILITY PROGRAM	(41,430)	(41,950)	(42,890)	(44,280)	(45,610)	(46,860)	(48,180)	(49,480)	(50,840)	(52,240)	(53,680)	(55,150)	0	0	(572,570)
TRANSIT MOBILITY -- STREET & ROAD	0	0	(130)	(1,290)	(1,680)	(1,110)	(200)	(2,200)	(14,440)	(7,610)	0	0	0	0	(28,660)
SUBTOTAL	(41,430)	(41,950)	(43,020)	(45,570)	(47,290)	(47,970)	(48,380)	(51,680)	(65,280)	(59,850)	(53,680)	(55,150)	0	0	(601,230)
EQUALS TOTAL REQUIREMENT	(170,042)	(174,122)	(176,962)	(187,085)	(194,615)	(197,883)	(200,202)	(207,909)	(259,055)	(270,163)	(274,225)	(291,601)	0	0	(2,603,864)
PLUS SOURCES:															
SALES TAX RECEIPTS	165,710	167,790	171,560	177,140	182,450	187,470	192,620	197,920	203,360	208,960	214,700	220,610	0	0	2,290,290
FEDERAL GRANTS (FORMULA)	9,584	40,761	24,670	14,904	13,077	12,331	12,492	12,334	11,946	11,343	10,655	9,921	0	0	184,018
INTEREST INCOME	29,780	30,720	30,440	29,120	27,850	26,600	25,740	25,360	16,740	6,670	3,320	2,080	0	0	254,420
FEDERAL GRANTS (DISCRETIONARY)	32,236	38,169	52,170	57,976	100,753	159,239	206,938	268,896	25,884	17,687	8,565	2,949	0	0	971,462
STATE GRANTS	0	0	0	20	2,810	2,830	4,350	14,010	19,200	13,990	12,620	9,530	0	0	79,360
PRIVATE SECTOR GRANTS	0	0	0	0	9,750	17,130	23,940	32,010	28,910	19,600	9,090	2,520	0	0	142,950
SUBTOTAL	237,310	277,440	278,840	279,160	336,690	405,600	466,080	550,530	306,040	278,250	258,950	247,610	0	0	3,922,500
EQUALS INCREASE (DECREASE) TO RETAINED EARNINGS	67,268	103,318	101,878	92,075	142,075	207,717	265,878	342,621	46,985	8,087	(15,275)	(43,991)	0	0	1,318,636

Figure 19--Houston METRO Budget Scenario Analysis

LOS ANGELES METRO RAIL

The Los Angeles Metro Rail system is one of the most ambitious rail construction projects in the country today. Not only does it represent a substantial allocation of public funds to retrofit a rail system into what is considered the "freeway capital" of the U.S., but the funding strategy for the system includes a variety of federal, state and local sources which makes it a useful case study for this research. In addition, some of the local funding, that coming from benefit assessment districts surrounding Metro Rail stations, has been subject to legal action thus providing some indication of the controversies that may surround such funding strategies.

Background

In 1980, the voters of Los Angeles County passed Proposition A which authorized a one-half cent increase in the sales tax to fund mass transportation improvements. The proceeds of this tax are divided into three categories: 25% of the revenues go to cities in the county for transportation purposes, 35% goes to the Los Angeles County Transportation Commission to construct the Metro Rail system, and 40% is for discretionary purposes that is currently used to support bus operations. Proposition A became a major policy and funding source for a 150-mile, regional rail rapid transit system that was developed in varying levels of detail in the early 1980's. In 1983, a final environmental impact statement was published with a locally preferred alternative that was considered the starter line for the Metro Rail system. This starter line was an 18.6-mile heavy rail subway with 18 stations. A major portion of the funding for this starter line was to come from UMTA, 68.6% of the total estimated cost of $3.309 billion. The state was going to contribute $400 million, local governments $481 million, and $170 million was to come from revenue bonds that were based on special assessment district financing.

The locally preferred alternative was not advanced into design because it was discovered that some segments of the alignment crossed areas where naturally-occurring methane gas was being produced. Congress passed a law which stipulated that Metro Rail's starter line could not be constructed in such risk areas, and further, the original locally preferred alternative had to be modified to find acceptable alternative alignments. In 1988, a new locally preferred alternative (now known as the Metro Red Line) was approved. The new alignment consisted of 17.4 miles

and 16 stations. The eleven-year construction project was to be undertaken in three stages--minimum operatable segment 1 (MOS-1) to open in FK 1994; MOS-2 to open in FY 1999; and MOS-3 to open in FY 2001 (see Figure 20). MOS-1 is currently under construction. A funding agreement on MOS-2 was signed with UMTA in April, 1990. MOS-3 is in planning and in preliminary engineering. This new alignment is estimated to carry 298,000 riders per day (66,000 less than the first alternative) and cost $3.918 billion. In addition, transit planners argued that the new alignment provided better joint development potential near its proposed stations, increasing the estimated benefit assessment revenues from $85 million in the original alignment to $205 million with the new alignment. Some transit officials also argued that the new alignment strengthened local support for the rail system due to its now avoiding the methane risk areas and a realignment in a controversial segment along Wilshire Boulevard.

In addition to the Metro Red Line, the Los Angeles County Transportation Commission is also building or planning to build other rail lines. The recently opened Blue Line from Long Beach to downtown Los Angeles was funded entirely with Proposition A funds. A Green Line, also funded entirely with Proposition A funds, will serve the El Segundo employment area with possible future extensions north and south along the coast. Figure 21 shows the rail transit plan for Los Angeles County as currently envisioned.

An "institutional" characteristic of the Metro Rail system also merits some attention in this background section. As noted above, the Los Angeles County Transportation Commission (LACTC) is the local agency that receives the Proposition A funds to construct the rail system. The Southern California Rapid Transit District (SCRTD), created in 1964, is the agency that operates the transit system. The SCRTD was the agency that initially developed the plans for the rail system. The division of responsibilities between both agencies for building the rail system, however, were not clear and often subject to political coalitions that could change with differing circumstances. Both the LACTC and the SCRTD were authorized by the Public Utilities Code to plan, design, and construct an exclusive public mass transit guideway system. The SCRTD was the UMTA grantee for the planning, design, and construction of MOS-1, but the LACTC was the grantee for MOS-2. Before signing a full funding agreement for MOS-2, UMTA insisted that some local agreement be reached on ultimate responsibility for MOS-2 and

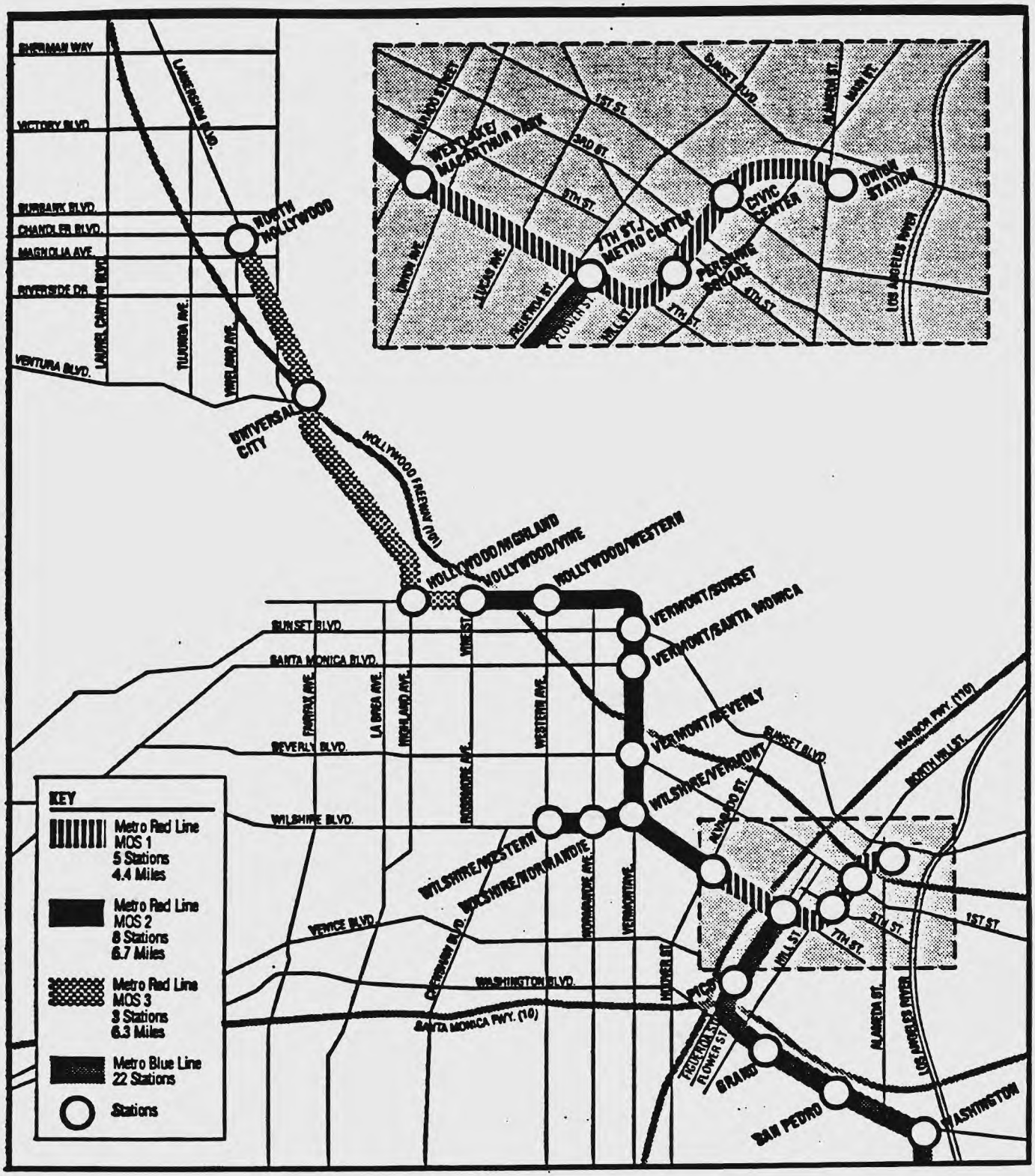


Figure 20–Metro Rail Red Line

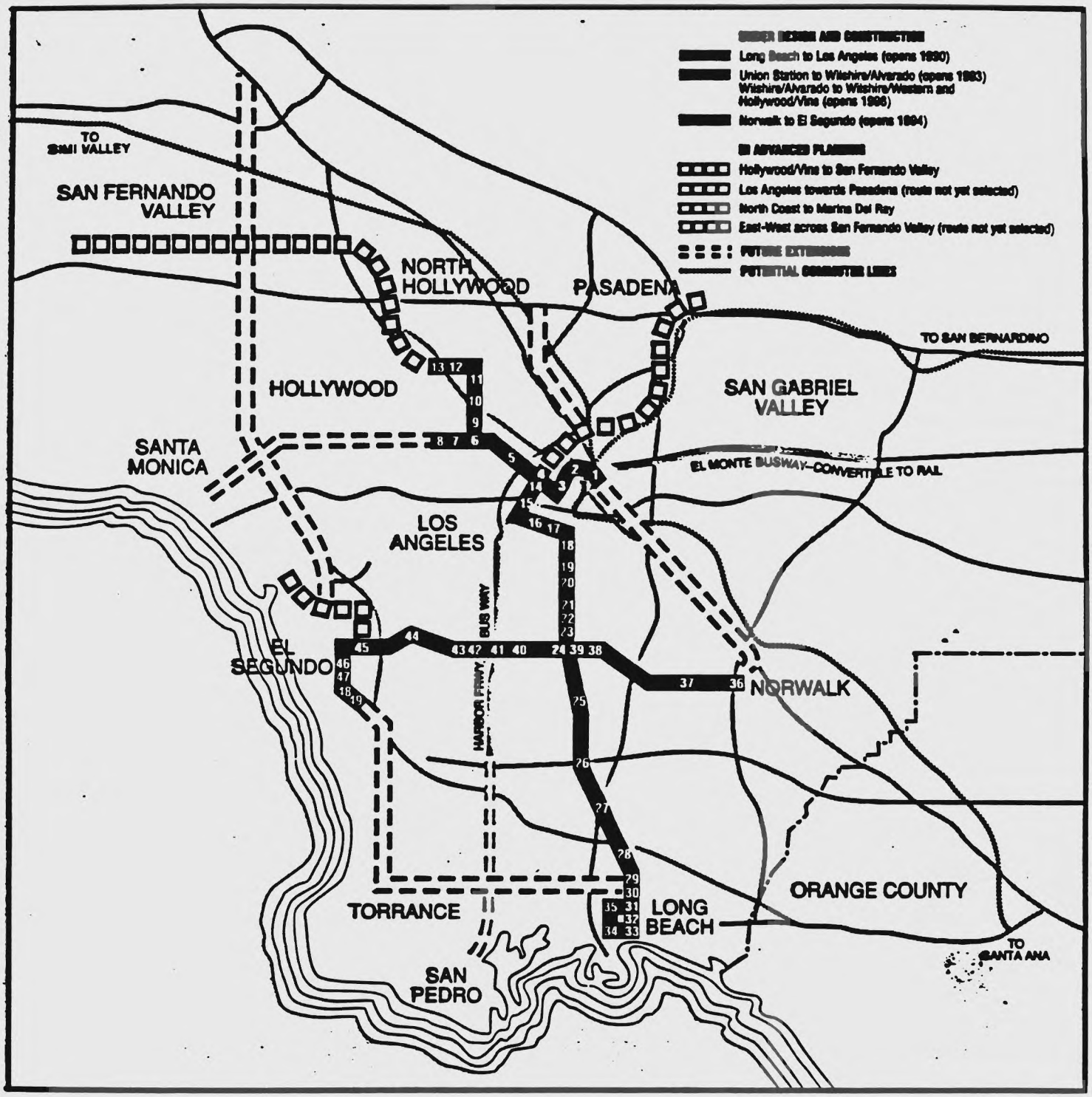


Figure 21--Los Angeles County Planned Rail System

the Metro Red Line. In response, the LACTC and the SCRTD signed an agreement in January, 1990 that defined the basic roles and responsibilities as follows:

- The LACTC will be the policy making and authorizing agency for MOS-2.
- A Rail Construction Corporation (RCC) will be responsible for the day-to-day management and decision-making for all rail construction projects. The RCC will consist of seven members, three appointed by the LACTC, three by the SCRTD, and the chairman appointed by the RCC Board.
- The SCRTD will provide technical and support functions to LACTC for MOS-2, and will be the operator of all rail systems in the County.

The importance of this agreement lies not only in understanding which agency has ultimate responsibility for Metro Rail planning, but also in the institutional arrangements for funding the system. The SCRTD was the agency originally authorized by the California legislature (S.B. 1238) to establish special benefit assessment districts. Thus, the LACTC's financial plan for the County's rail system necessarily had to include some agreement with the SCRTD to use this benefit assessment authority to fund part of the rail system. The January agreement included the following language which dealt with this issue, "SCRTD agrees to establish beneift assessment districts and pay over to LACTC the net proceeds to the full extent allowed by law of all benefit assessment revenues which SCRTD collects as a result of establishing benefit assessment districts for the Metro Red Line Project."

Funding

The financial plan for the Metro Rail Red Line project is shown in Table 14. As can be seen in this Table, there are several sources of funds for this project.

Local: The local revenues come from three major sources: the Proposition A funds administered by the LACTC, the City of Los Angeles (from its share of the 25% apportionment of Proposition A funds to County cities); and benefit assessment districts. The Proposition A funds were discussed previously and will thus not be discussed again. The benefit assessment funds, however, merit special attention because they are viewed by Los Angeles officials as clearly part of their Overmatch contribution. In 1983, the SCRTD was authorized by the state legislature to form special benefit assessment districts in the vicinities of proposed rail stations.

This legislation allowed the SCRTD board, after public hearings, to estimate the benefit to a district from the operations of the local stations, levy assessments in proportion to those benefits, and issue bonds repayable through special assessments. The sole means to protest the creation of a special assessment district was be a referendum election, where only voters who were owners of real property were allowed to participate. In 1985 the SCRTD Board passed a resolution to create two special assessment districts in downtown Los Angeles, with an initial rate of assessment of $0.30 per square foot of the greater of land or improvements and a maximum rate of $0.42 per square foot. Such assessments were to terminate in the year 2008. The resolution was submitted for approval to the Los Angeles City Council which approved it on the condition that all residential property within the districts be exempt from the assessment. The SCRTD Board accepted the proviso and in 1986 officially formed the two assessment districts. However, the creation of these assessment districts was challenged on the legal ground that the election appeal mechanism violated equal protection under the Constitution in that only

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TABLE 14--METRO RED LINE FINANCIAL PLAN

Los Angeles Metro Rail Red Line Project
Financial Plan
($ Millions)

			PHASE 2					
	MOS-1 ($'s)	%	MOS-2 ($'s)	%	MOS-3 ($'s)	%	TOTAL ($'s)	%
LOCAL	$. 475	34%	$ 593	41%	$ 284	26%	$1,352	35%
LACTC (Prop A)	243.5	18%	439	30%	155	14%	837.5	22%
City of Los Angeles	101.5	7%	96	7%	112	10%	309.5	8%
Benefit Assessment	130	9%	58	4%	17	2%	205	5%
STATE	$ 214	16%	$ 186	13%	$ 115	11%	$ 515	13%
FEDERAL	$ 696	50%	$ 667	46%	$ 688	63%	$2.051	52%
TOTAL	$1.385	100%	$1.446	100%	$1.087	100%	$3.918	100%

Source: Los Angeles County Transportation Commission, 1990

property owners were allowed to vote. In May, 1990, the California Court of Appeals agreed with this challenge and invalidated the state law which granted the SCRTD authorization to create assessment districts. Given the important role of benefit assessment revenues in the financing of the rail system, the SCRTD and the LACTC could not allow this source of funds to disappear. The SCRTD has appealed the Court's findings and the State Supreme Court has agreed to hear the case.

State: The California Transportation Commission (CTC) administers the state's Transit Capital Improvement Program and the Fixed Guideway Program. Although the CTC's original commitment to Los Angeles's rail system was capped at $400 million, the CTC increased its commitment in 1989 to $515 million. This commitment was increased for several reasons. The CTC felt that local agencies had significantly increased their local share of the project cost, thus showing strong commitment to the rail line. The additional state funds would allow the LACTC to leverage additional rail construction in Los Angeles County through its use of Proposition A funds. Finally, Metro Rail had been continually identified as the Los Angeles County's highest priority over several years, and thus warranted higher state funding.

Several recent changes in state law also provide possible sources of new state funding. A law was recently passed which provides up to 50% state funding of rail construction costs, previously the limit was 20%. Los Angeles officials felt that this increased state share might not help them that much because other California cities will be competing for these funds.

Financial Planning

The LACTC has undertaken a major effort to develop financial plans for the construction and operation of the Metro Rail system. This planning has taken two forms that are of interest to this research project.

Cost Overruns--One of the interesting aspects of the local funding for the Red Line was the distribution of additional costs that were identified after the full funding agreement with UMTA was signed. A 1990 financial plan for the Metro Red Line identified an increase of $473 million over a financial plan presented the year before. The Executive Director of the LACTC, in a letter to the Executive Director of the CTC, stated that this increase could be attributed to two basic factors:

1. An audit in late 1989 found $135 million in cost overruns for MOS-1.

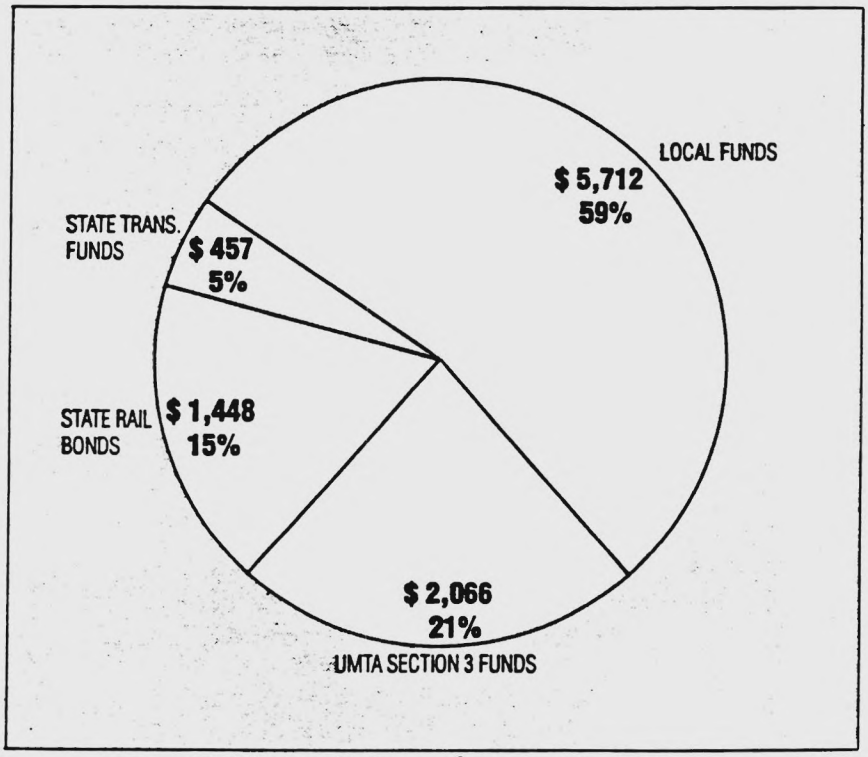
2. A one-year delay in signing federal commitments for Phase II of Metro Rail and a limited federal funding commitment which resulted in the creation a two-part Phase II (i.e., MOS-2 and MOS-3) resulted in $338 million in inflationary increases.

The $135 million MOS-1 cost increase and the $23 million MOS-2 cost increase willbe shared equally by the LACTC and the City of Los Angeles through their Proposition A funds. The LACTC expects that UMTA will share about 54% of the $315 million cost increase in MOS-3, with the LACTC and the City sharing equally the remaining portion.

Long Term Financing--Figure 22 shows the funding shares for the entire LACTC Metro Rail system. Figure 23 shows one estimate of the revenue and cost stream for the construction of the entire rail system. As can be seen in Figure 23, there are several "out" years where the expected revenues do not meet cost requirements. Because of these shortfall, the LACTC has been conducting long-term financial planning which explores the implications of different project scheduling and cost savings plans. One of the options under consideration, as stated in the LACTC Transit Financial Plan, was to "look to the communities along each line to help reduce the project costs to the Commission and/or raise additional revenues." Specific cost savings options include: accelerate construction of project lines, assume longer train headways to decrease number of vehicles needed, reduce number of stations, conduct value engineering, City financing of some construction through bonding or other revenue sources.

Overmatch Policy

The Los Angeles Metro Rail system was one of the first rail investments in the country to use an overmatch contribution to attract federal funds. According to LACTC officials, the overmatch for MOS-1 and MOS-2 was deemed necessary to convince UMTA that the rail projects were worthy and to avoid antagonizing other transit properties around the country who were also competing for capital funds. The shear size of investment commitment dictated a higher-than-required local share. For example, $557.1 million of the $1.446 billion project cost for MOS-2 is listed in local share as overmatch. For MOS-3, which is still in planning and early design stages and for which there is no UMTA funding agreement, the preliminary financing figures show an approximate $127 million overmatch commitment. In all three



TOTAL: $ 9,683

Figure 22–System Funding Sources

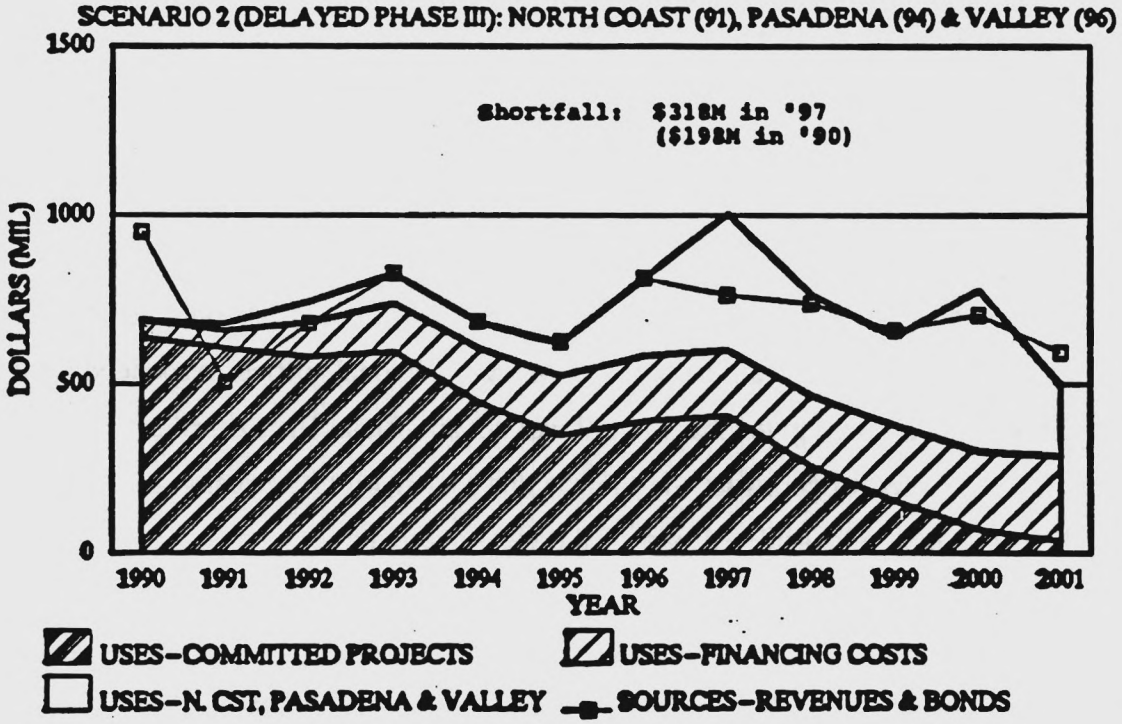


Figure 23–Revenue and Cost Forecasts for System Scenario

operating segments, LACTC officials said that it was assumed a 50% federal contribution was reasonable. The 46.1% federal share for MOS-2 is the result of cost increases which have been covered with local funds, thus reducing the overall federal share for this project. The 63.3% federal share for MOS-3 represents additional costs associated with delays in reaching agreement on the MOS-2 and MOS-3 projects. In addition, this federal share should be considered only an estimate given that there is no UMTA commitment to MOS-3 at this time.

LACTC officials also used the provision of overmatch for attracting federal participation as an argument to the CTC for obtaining additional state funds. The CTC had commited $115 million to the construction of MOS-3, but CTC staff were questioning whether this level of funding should be reduced given a higher-than-fifty-percent assumed federal share. In response, LACTC argued, for several reasons, that this state commitment should remain. One of the reasons listed was that "an attractive balance of federal, state, local, and private sector financial commitments can be offered in support of the project as it competes with other projects for federal funds nationwide." In other words, the $115 million was needed to allow LACTC to provide an overmatch incentive for federal funds.

LACTC feels the overmatch policy has been advantageous to Los Angeles, even though LACTC officials do not know what the exact policy is. They have not seen any guidance on what it officially is supposed to be, nor has the UMTA regional office been able to explain what is entailed. An example of how this lack of a written policy has affected LACTC can be found in the current construction of tunnels for MOS-2. LACTC determined that cost savings could occur to the overall project if tunnel construction for MOS-2 could be continued on segments that adjoin with the MOS-3 alignment. UMTA's regional office responded that such construction was not allowed given that MOS-3 was not an official UMTA project, but suggested that local funds be used to construct the tunnels and that if MOS-3 became a federal project, these sunk costs could be considered part of the local overmatch. When asked how to do this officially, the UMTA regional office did not know.

LACTC officials did argue forcefully that UMTA needs to be concerned about long-range financial planning. Such planning has been undertaken by LACTC and has indicated financial problems in later years, if nothing is done now to provide for sufficient funds.

Although such planning often goes beyond the boundaries of the official "federal project", LACTC feels that UMTA should be concerned about local financing capability to fund the ultimate system given that such capability will surely affect the local ability to operate the project that is built. This use, and concern for, long-term financial planning is perhaps the most important observation that surfaces from the Los Angeles case study. Although not directly related to the source of overmatch funds, certainly the uncertainty associated with local funding sources (like benefit assessments) should indicate the need for such long-term planning and contingency analysis.

THE BAY AREA'S REGIONAL TRANSIT PACKAGE

The San Francisco Bay Area has adopted a wide-ranging transit investment plan that is designed to take the Bay Area into the 21st Century. The plan requires over $3.3 billion to implement and consists of six major projects. In an attempt to provide an incentive for Federal funds, these six projects are being presented as a package. Because of this "package deal" approach in responding to the Overmatch policy, the Bay Area was chosen for more detailed analysis in this research project.

Background

Rail transit has played an important transportation role in the Bay area. The opening of the Bay Area Rapid Transportation (BART) system in the mid-1970's was intended to be the beginning of an ambitious region-wide rail system that interconnected the nine counties in the metropolitan area. However, the plan actually adopted by the voters in 1962 only included the three core counties. Recognizing the problems caused by this reduced regional rail system, the Metropolitan Transportation Commission, the metropolitan planning organization for the Bay area and the agency responsible for approving transit capital investments, began a process in the early 1980's which resulted in the publication in 1984 of an interim plan which showed new potential rail lines in the region. In 1988, the MTC adopted Resolution No. 1876 which outlined how these new rail lines were to be funded. Importantly, this Resolution provided the means by which another county would join the BART system.

This rail plan would extend BART to San Francisco Airport, provide for BART line extension in three directions, extend a commuter rail line closer to downtown, and extend a light rail line in Santa Clara County. The projects and cost sharing are shown below.

Project	Project Cost
BART Extension to Airport	$878 M 75% Fed Share
BART Extension to West Pittsburg	$425 M 0% Fed Share
BART Extension to Dublin	$514 M 0% Fed Share

BART Extension to Warm Springs	$521 M 0% Fed Share
Commuter Rail Extension	$658 M 25% Fed Share
Light Rail Extension	$350 M 50% Fed Share
Totals	$3.346 B
Federal Share ($)	$1.000 B
Federal Share (%)	29.88%

The less-than-30% total Federal share is not coincidental. MTC officials believed, according to an announcement in the **Federal Register**, that UMTA had commited to expedited processing of documentation for those funding requests which had less than a 30% Federal share. This expedited handling was to mean a six-month turnaround time rather than the average 18-month turnaround for initial funding proposals. The MTC sent a letter to Secretary Skinner emphasizing the size of the local commitment and suggesting that such commitment was in substantial conformance with the intent of the Overmatch policy.

Funding

The funding formula for each of the six above projects was spelled out in Resolution 1876 which makes the funding commitment fairly firm. The funding sources for the specific projects are shown in Table 15. The local (non-state) funding share is derived from both old and new county sales taxes dedicated to transit, BART reserves, old and new bridge tolls, and Santa Clara light rail funds. The state will contribute $736 million out of state dedicated transit funds and rail bond funding that was approved by California voters in referendums 108, 111, and 116 of 1990. There is not expected to be substantial funding from the private sector although BART is searching for joint development opportunities around some BART stations.

Overmatch Policy

The MTC has adopted the Overmatch policy as part of its strategy for obtaining Federal aid for the proposed rail plan. As noted earlier, a letter was sent to Secretary Skinner in this regard by the Executive Director of MTC. At the time of the interview, MTC officials had not heard any information that made them believe the Overmatch policy was actually going to be implemented. Without specific UMTA action, MTC officials felt there was little basis for determining the effectiveness or equity implications of the policy. There was a feeling that if some grants were actually awarded on the basis of an Overmatch, local agencies would be placed in a better position to respond in ways that meet UMTA's objectives.

TABLE 15–PROPOSED PROJECT FUNDING AND SOURCES

RTIP FUNDING ASSUMPTION: Three SCA1 Bond Issues Pass, No PCL

	Caltrain Extension	BART SFO	BART West Pittsburg	BART Dublin	BART Warm Springs	Santa Clara Tasman	TOTAL
Alameda 1/2 ¢				183 (1)			183
BART Reserves			40 (2)	51	16		107
SM New 1/2 ¢	229						229
SM Existing 1/2 ¢		109	94 (2)	73	85		361
SM/CTC Exchange (11)			41		68		109
SM Existing 1/2 ¢ San Francisco Santa Clara	235 (3)						235 (3)
Santa Clara (Light Rail)						87 (4)	87
Existing Bridge Tolls			10	17	2		29 (5)
New Bridge Tolls			50		83		133 (5)
Contra Costa 1/2 ¢			245 (7)				245
Subtotal	464	109	480	324 (10)	254 (10)	87	1718
State TCI		109 (11)	27	63	78		277 (6)
SCA1 Rail Bond (Co. Min.)	11 (9)					22 (4)	33
SCA1 Rail Bond (Discretion)	18 (9)		35	127	180	66	426
Federal	165	660				175 (4)	1000
Subtotal	194	769	62	190 (10)	258 (10)	263	1735
Total Revenues	658	878	542 (2)	514	512	350	3454
Costs	658	878	425 (8)	514 (8)	521 (8)	350 (8)	3346 (8)
Balance	0	0	117	0	-9	0	108

(1) Revenues have been revised downward from $170 million in '86$ to $147.5 million in '88$. The Authority is currently reevaluating the latter figure.

(2) Per the provisions of SB1715, the Eastern Contra Costa extension shall receive $425 million ('87$), including $34 million from BART and $74 million from SM.

(3) The local share of this project is $173 million ('87$) per Resolution 1876, escalated according to its construction schedule. Each county's share is subject to an agreement between San Francisco, San Mateo, and Santa Clara counties.

(4) The Tasman project is funded 50% Federal and 50% State and Local sources.

(5) Tolls from Regional Measure 1 will raise $7 million annually. Assuming a bond is issued in FY 97, the proceeds from the toll increase are $133 million, escalated. Total combined revenues are divided 37.2/62.8 between Constra Costa and Alameda County BART extensions, based on the counties' relative populations.

(6) Includes $248 million (escalated) committed by CTC for 89/90 thru 97/97, and $29 million received prior to this period. A total of $79 million in Article XIX funds is provided for in the $3.5 billion pledged to eliminate the 1988 STIP deficit, through FY 92/93. TP&D funds are used to finance the remaining $169 million.

(7) The $245 million shown here represents Contra Costa's $178 million ('87$) Res. 1876 commitment, escalated to the midpoint of the project's construction.

(8) BART extension costs are from the table attached to the BART General manager's letter to MTC dated May 9, 1990. Caltrain costs are from Morris-Knudsen's 1989 estimate of a 2nd/Market Terminal.

(9) The remaining costs on the CalTrain project are programmed from SCA 1 rail bond funds, which are divided among SF, SM, and SCL according to daily boardings. Daily boardings are based on projections of system-wide ridership for the 2nd and Market extension, and are split 28% SF, 38% SM, and 34% SCL.

(10) The amount required to match state funds will come from local sources required to fund the balance of the project.

(11) San Mateo funds for BART Eastbay extensions are equal to CTC funds allocated to BART SFO in accordance with the regional agreement.

Unless noted above, figures are from the revised (4/89) Resolution 1876 agreement, escalated to the period of construction.

CONCLUSIONS AND OBSERVATIONS

This research project has provided a national perspective on the transit industry response to the Overmatch Initiative. In addition, through more detailed case investigations and interviews with transit officials, the research team has investigated the possible future applications of overmatch-type policies. The conclusions and observations from this research project will be divided into three major areas--Response to the Overmatch Initiative, Recommended UMTA Actions, and Policy Implementation Guidance.

RESPONSE TO OVERMATCH INITIATIVE

The research team found that, in general, there was a mixed opinion on the usefulness and appropriateness of the Overmatch Initiative. In particular, numerous transit officials expressed concern about the "fairness" issue, that is, giving those communities who can afford more local support an unfair advantage over those less able to do so. This concern was especially strong among those officials who thought that local share might be more important in UMTA's decisions than need or cost effectiveness. Several officials suggested that overmatch might be an appropriate "tiebreaker" when transit needs have been satisfied and cost effectiveness determinations find that proposals are about even. Several agencies supported the Overmatch Initiative because they felt that it was a good way of stretching limited Federal dollars.

The research project found several communities that had already begun overmatching, some at 100 percent local shares, even before the New Starts policy or the Overmatch Initiative had been announced. The major reason for this overmatch was to avoid what were considered to be excessive delays due to Federal process and oversight requirements. In Baltimore, for example, the Central Light Rail line is funded with 100 percent local funds, according to local officials to expedite its construction. In Los Angeles, several light rail lines are also funded 100 percent locally so that they can be done "in this Century". It seems apparent, therefore, that several communities were already in the process of raising local funds to support transit capital investment. In the context of this phenomenon, there can be no definitive statement that the overmatch policy has had a significant impact on local transit financing decisions.

In those cases where a local overmatch was provided, a surprising number of proposals were

initiated by private sector representatives. Although the number of such cases was quite small, especially when considered in light of the small number of agencies that responded to this survey question, the expectation was that almost all of the initiation would have been done by transit agencies.

Very few transit agencies seem to be using a long-term financial model to consider total systems cost in project proposals. The uncertainties associated with the stability of revenue sources over time requires that a fairly sophisticated financial analysis should be conducted of an agency's ability to support its system and the new project in future years. In Los Angeles, for example, such a budget scenario analysis allowed officials to determine that several projects were not likely to be funded because existing local funding sources were not going to provide sufficient revenues. In Houston, a budget scenario analysis provided good information to METRO officials about their cash flow given the construction of different transit proposals. Given that the overmatch policy encourages a greater local match, it becomes important that a greater emphasis be placed in the development of realistic financial scenarios. This is especially true if private sector funding is expected in support of a project, where that funding is predicated on assessments or some other mechanism that depends on market forces.

An analysis of the Section 15 data base showed no indication that the New Starts overmatch criterion had any measurable impact on local financing of transit. This conclusion, although it supports the results from the rest of the research project, should be treated with some caution. In particular, it was somewhat difficult to identify private sources of funding in the Section 15 data base. In addition, the year-to-year variation in revenue sources was rather substantial, leading one to suspect that the data might not be that reliable for the purposes of this research project.

Only one region, the Bay Area, seemed to be approaching the Overmatch Initiative from a regional or programmatic perspective. The Bay Area transit overmatch strategy is based on an extensive, region-wide study of what transit capital improvements are needed in the future. Some of the facilities are to be funded with 100 percent local funds, and others are expected to have varying levels of Federal participation. Although somewhat unique in its approach, the systems perspective in transit capital planning seems to make a stronger case for Federal

investment in a region, rather than in a specific facility.

Several transit officials commented that the requirement for cash overmatch contributions was extremely limiting. Such a requirement was especially constraining when dealing with private sector contributions. The major means of such contributions in the past has been land donations and or leasing arrangements. Many transit officials stated that it is very difficult to convince private developers and businessmen to contribute funding for a particular project. As long as there is a cash requirement, private sector contributions will not likely play a major role in overmatch contributions. Outside of the private sector issue, numerous transit officials thought that "in-kind" services should be allowed as part of an overmatch given that it is a cost associated with a project.

A large percentage of the survey respondents stated that they do not know how to initiate an overmatch request, or for that matter how to raise the additional funds at the local level. There was a fair amount of interest in the overmatch concept and how transit agencies could use it to raise additional local funds. This finding suggests that additional information on the Initiative and further research on innovative local funding sources would be well received by the industry.

There was no perceived difference in the overmatch policy between the three UMTA program Tiers. Although a small number of transit officials did know the different overmatch concepts associated with each of the three UMTA program categories, the vast majority of the survey respondents did not know that the Overmatch Initiative applied to all three. Most all respondents thought the Initiative was soley aimed at new starts.

There is no industry agreement on whether the Overmatch Initiative is a good or bad idea. Many survey respondents said that no UMTA decisions have been made on the basis of overmatch, so that it was too soon to determine the policy's appropriateness. Others were vehemently opposed to any policy that required a greater local match. And others felt that the concept was quite good.

RECOMMENDED UMTA ACTIONS

Perhaps the most important recommendation from this research project deals with future use of the overmatch concept in transit and other transportation programs. The scant literature that has addressed this type of intergovernmental program management seems fairly clear on the benefits (from a national perspective) of allowing local applicants to propose a greater local share for specific proposals. Not only does this allow Federal funds to be leveraged against more projects, it encourages communities to provide a closer representation of what they are willing to pay for a service. It also forces a consensus at the local level that this proposal is something the community should be doing.

However, an overmatch concept is only likely to work if there are substantial incentives to encourage local officials to contribute additional funding. There does not seem to be any evidence that UMTA has been significantly influenced in its project decisions by the existence of overmatch. The Overmatch Initiative does allow greater flexibility in program management, but generally the survey respondents did not feel that overmatch has become an important consideration in UMTA decisions. One way of dealing with this is to change the focus of the Overmatch Initiative away from the individual project basis to the regional, programmatic perspective. In many cases, one of the most controversial positions taken be UMTA has been the one-corridor-at-a-time approach to Federal funding. Although a systems planning component is incorporated into this approach, some argue that the resulting process severely limits an agency's ability to take a system's perspective in its planning for a community's transit future. The Bay Area strategy, which took a long time to develop and to secure local funding sources, seems to allow a systems perspective while at the same time developing an overall funding strategy for the region. It also forces the local agencies to adopt a long-range financial planning perspective in their formal planning efforts. Allowing communities to get away from a corridor-by-corridor analysis might be a good incentive to local officials in seriously considering the Overmatch Initiative.

UMTA should also take steps to require a long-range, financial planning process in connection with UMTA projects. This includes not only the UMTA project, but also the Undertaking and, in some cases, the entire financial capability of the agency. It is not

unreasonable to expect that Federal funds will be spent contingent on the existence of an assessment of the local agency's ability to operate the facility and other services in the region. This requirement could be made procedural, or be provided through technical guidance. Case studies of successful financial forecasting (such as Los Angeles and Houston, in this research) could be used to develop an industry-wide approach to such forecasting. The Federal interest in making sure an investment will meet national needs goes beyond the narrowly defined project under consideration.

There is a perception that the Overmatch Initiative is unfair to those communities that are unable to afford additional local funds, and thus, as many survey respondents stated, "the rich get richer". This equity issue is a serious one and needs to be dealt with. The overmatch criterion in UMTA evaluation is clearly an important one, but either it should receive less weight than other criteria (which it might have already), or applicants should be classified in some manner by their ability to pay. In the latter case, some index could be developed for each applicant community which examines economic growth, tax base, future population/employment figures, etc., and if it is determined that a community is in a strong growth or healthy climate, the overmatch criterion will be given greater consideration. Those communities that fit into the other category would not have overmatch as a criterion in the funding decision. Another way of accomplishing this objective is to lower the current Federal matching ratio from 80-20 to 60-40 (or even 50-50) and provide extra Federal grants to those communities showing need or which meet some national criterion (for example, air quality improvement).

Many respondents identified the cash requirement as unnecessarily stringent. This is apparently so especially in the case of encouraging private sector contributions. A list of acceptable "in-kind" services or donations should be incorporated into the Overmatch Policy. These in-kind donations should clearly relate to a reduction in Federal costs and not be services or facility construction that would have been provided by the local agency.

POLICY IMPLEMENTATION GUIDANCE

It was clear from the survey results and from the case investigations that many transit officials did not know much about the Overmatch Initiative. Although several did have the

"Dear Colleague" letter from the UMTA Administrator, most had expected to receive further information on what the Initiative consisted of, and what steps were necessary to participate in the program. In particular, several transit officials commented that the UMTA regional offices were not able to provide much further information that what was available in the letter. This lack of information, perhaps more than anything else, has probably beem an important reason for limited local response to the Initiative. If UMTA is serious about the Overmatch concept, it seems clear that technical guidance should be issued, information disseminated on successful overmatch efforts, and clear indications given on how important overmatch is in the UMTA decision-making process. A policy which relies on incentives to encourage a change in local behavior needs to make clear what these incentives are.

Appendix A--Overmatch Survey

OVERMATCH INITIATIVE SURVEY

A. CAPITAL PROJECTS

1. Has your agency initiated or continued implementing any capital projects/ undertakings since UMTA's Overmatch Initiative of 1984? If yes, please complete the remaining parts of this survey. If no, please proceed to question 6. If you need to use additional sheets to complete the questionnaire, please do so.

Yes _____ No _____

2. Please identify these projects below.

TITLE/NAME	PROJECT STAGE (Planning, AA/DEIS, Pre. Eng'g, etc.)	EST. PROJECT COST (1984-1990)
		Total_____
		Federal_____ %
		Local_____ %
		Total_____
		Federal_____ %
		Local_____ %
		Total_____
		Federal_____ %
		Local_____ %

B. FUNDING

3. What are the sources of the local share for each project listed in question 2 above? Please list these. What kind of overmatch is involved? For example, in-kind, etc.

	Geopolitical Level? (City, County, Region)	Form of Overmatch	Source(s)	Dedicated?
Project 1				
Project 2				
Project 3				

4. a) If any portion of the local share is being provided (or you anticipate will be provided) by non-governmental (e.g., private sector) entities, please describe the source and amount.

b) Was this offer initiated by the non-governmental groups or was the support solicited by the transit agency or facilitated by other means such as zoning?

5. To what extent did you consider the full costs of total system implementation when deciding to apply for federal money for initial projects?

C. PERSPECTIVES ON THE OVERMATCH POLICY

6. If you are providing more local share than is required (i.e., an overmatch), why are you doing so?

7. Based on what you have received or heard about UMTA's Overmatch Initiative, how would you describe what this policy is. Do you perceive any difference in the Overmatch incentives if one is considering bus or bus-related projects versus new starts versus rail modernization?

8. What, in general, is your assessment of the Overmatch Policy?

9. Have you generated activity as a result of the Overmatch Policy or has your agency generally adopted such a policy all along?

10. What changes in the Overmatch policy would you recommend?

11. Do you think the Overmatch policy is equitable? Why or why not?

12. Do you think the Overmatch policy is efficient? Why or why not?

13. What kind of incentive can be added to encourage use of the Overmatch Initiative?

14. What problems have you encountered in implementing the Overmatch policy?

15. Please attach any documents/publications which would be of assistance to us in understanding your responses.

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